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Australian Orchid Review

Index to Volumes 41, 42 and 43 — 1976, 1977, 1978

Compiled by **RONALD KERR**

for the Publishers

THE HARBOUR PRESS

Sydney, Australia

Italics of both names indicate
species orchids.

The Official Organ of the

THE ORCHID SOCIETY OF WESTERN AUSTRALIA

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17 APR 1980

Australian Orchid Review

PUBLISHED QUARTERLY

Volume 42, No. 1

\$1.50

March, 1977

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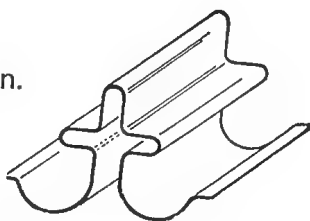
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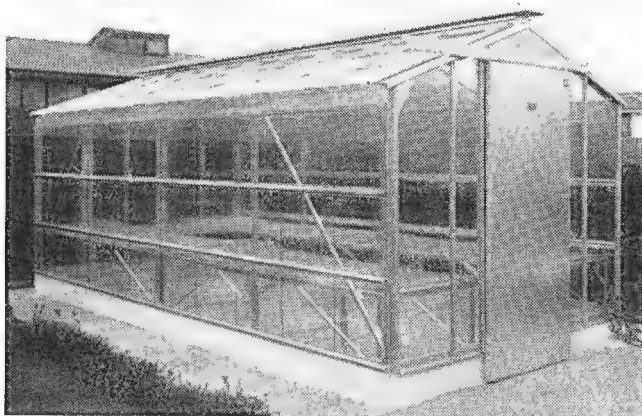
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Australian Orchid Review

MARCH, 1977

VOLUME 42

No. 1

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Orchid names: A species of orchid has both terms in italics and only the first term has a capital. With hybrids the generic name (first term) is in italics but the second term is in roman with a capital letter. The name of a genus used in a non-botanical sense is in roman type and has no capital.

COVER STORY

This issue is proof that the Australian Orchid Foundation is now a power in the land. It is a young organisation designed to co-ordinate the activities of all those interested in the scientific and horticultural aspects of orchids. The Iron Range Expedition is a sign of its virility: This was no orchid. jaunt into the bush but a properly constituted scientific expedition to standards determined by the C.S.I.R.O. Elsewhere is a list of the growing number of growers and societies who are contributing to the objects of the Foundation. You are invited to join them with finance and suggestions for orchid projects. These should be sent to Mr. Gerald McCraith, Director, The Australian Orchid Foundation, 107 Roberts Street, Essendon, Victoria 3040. The cover orchid is a *Dendrobium* of the section *Grastidium*. Research will establish whether it is a completely new species or a first recording for Australia.

WHOEVER INVENTED COLCHICINE?

SYD MONKHOUSE

President, Australian Orchid Council

Is it not amazing that once a workable system of plant name and hybridising recording has been established some smart person introduces something to really rock the boat.

Fortunately, the time-proven method of recording orchid crossings, as originated by several far-sighted orchid hybridists in the late 1800's and carried on in later years by the firm of Sanders and ultimately the R.H.S. is in no danger. However, the advent of meristem tissue culture and now to a much greater extent, the use of colchicine to alter the ploidy of orchid clones has really played havoc with the cultivar names of hybrids and even the varietal names of species.

Taking meristem propagation first — anyone who has raised large quantities of "mericlones" could not help but notice that in the case of some cultivars, odd mericlones do produce flowers quite different to the bulk of the batch. This, the experts tell us, is impossible, but in actual practice it happens, therefore are these odd "sports" to continue to bear the same varietal name as their brothers, even though they are distinctly different? The answer to this question I do not know, the main redeeming feature is that there is only the odd clone that performs in this way therefore perhaps the problem is not very great.

Now we have the advent of the use of Colchicine or some similar means of inducing cell division of orchid plants. This is where the real problem occurs because, theoretically we should be turning diploids into tetraploids, triploids into hexaploids, tetraploids into octoploids and so on. Add to this the fact that some tissue may not be affected at all and just what do we get from a flask of colchicine treated mericlones?

The evidence that I have observed so far comes from the flowering of colchicine treated mericlones of one orchid only — *Cymbidium* Lunagrad 'Elanora'. Maybe not all clones will perform in the same way as our observations prove that this one did, however, they probably will and a real headache has been caused to the orchid world.

C. Lunagrad 'Elanora' is a diploid which flowers in Winter. It is a large, open-shaped

green with red marked lip. Three years' ago the first of my colchicine treated mericlones of this cultivar flowered on small plants. First flowerings produced immense round-shaped flowers with much wider petals and sepals than the original and a much broader lip with changed lip markings. They were, indeed, a completely new flower which was far removed from the original. The flower count was down but the plants were small and this was to be expected. During following years, I have observed very many treated clones of this cultivar flowering in different collections and some startling things have happened.

On fully matured plants growing under identical conditions, the number of flowers appears to revert to almost the normal average for the clone. As expected the treated clones still produce the odd plant that has not converted to a tetraploid. The really surprising result is the fact that there is definite variation amongst some of the converted plants with some flowers rounder and fuller than the type as described but some intermediate clones which vary from both extremes. What the technical answer can be I do not know but the practical fact remains that a flask of treated mericlones can produce several different variants of bloom.

Now comes the big problem — What do we call these new clones that are entirely different from the original?

Some nurseries have put the classic tetraploid indication 4N alongside the cultivar name of converted clones, e.g. Lunagrad 'Elanora' 4N. This, to me, is better than nothing, but still misleading. Unless a chromosome count is taken we cannot say the plant is a tetraploid and what if it has been converted to some other ploidy?

Some growers recommend that the converted clone be given a new cultivar name as it is no longer C. Lunagrad 'Elanora'. This argument breaks down because most of the converted clones are identical and what happens if 500 different growers give the same identical clone different cultivar names — Heaven forbid!

Probably the ideal would be for any grower

treating a batch of mericlones with colchicine or like cell dividing chemical or process, to flower all of his mericlones and then, when the best has been ascertained, to remercione this one and not release any until this has been done. They could then be given a new cultivar name. Of course, commercial organisations are much too impatient for this suggestion to work.

This is a very real problem to which many orchid bodies are turning their backs and possibly wishing it would go away.

If nothing is done, then the naming of orchids in five years' time when thousands of different colchicine treated clones hit the market, will be a farce. There will be little protection for buyers and possibly a multitude of different means of identification will be formulated to add to the confusion.

At the 1976 Annual Meeting of the Australian Orchid Council, a lead was taken with this problem which would probably be well adopted throughout the orchid world.

The Council adopted the recommendation "All meristem tissue cultured plants that have been treated with colchicine, and including all other treatments too, have the letters C.T. placed after the original cultivar name". This procedure will be followed throughout Australia and, unless other countries can devise a better idea, which we would be pleased to hear about, the suggestion is that the World Nomenclature body and all orchid societies use the same designation. If the letters 'C.T.' worry anyone because they were initially derived from "Colchicine Treated" and certainly many other processes can achieve the same conversion of ploidy, then the C.T. can easily be accepted as meaning "Chemically Treated". Thus, the treated clones of the cymbidiums referred to earlier would be C. Lunagrad 'Elanora C.T.'.

Let us not wait until the naming damage is irreparable — act now!

P.O. Box 1, O'Halloran Hill, S.A. 5151.

IT WORKS

— Mrs. R. Wilson in *Boolaroo O.S. Bulletin*.
Acting on a suggestion that old canes from softcane dendrobiums can be used to produce aerial growths I cut off all my old canes, put them in a jar of water and left them in the bushhouse. The water was topped up from time to time when watering, or by the rain, and after a few months aerals began to appear. Now I have a healthy crop of aerals ready to be potted and sold on the trading table.

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This new Society is full of enthusiastic native growers eager to share their knowledge and fellowship. They meet monthly in the Wollongong Town Hall Meeting Room on the second Tuesday of each month. Do drop in. Either to join or to visit.

NEW MEETING PLACE FOR GRAFTON O.S.

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At the last Annual Meeting Miss Doreen Zietsch resigned as Treasurer after 14 years sterling service. She is a foundation member and has now been made a Life Member.

Grafton O.S. has donated two sets of large print books and \$150 to the Clarence Regional Library, and \$50 to the Community Care Council.

CONTACTING ILLAWARRA O.S.?

Note the Honorary Secretary's new address: Mr. S. Astill, 14 Brookfield Ave., Warilla, N.S.W. 2528.

THE AUSTRALIAN ORCHID FOUNDATION

During September, 1976, the A.O.F. provided sufficient funds to make possible a joint venture with the National Parks and Wildlife Service of Queensland in a study, search, and survey project in the Iron Range area of Cape York Peninsula. The Directors are confident that all contributors to the Fund will be most interested and encouraged by this successful exercise. An abbreviated report by the leader Dr. Peter S. Lavarack is featured in this issue.

Mr. Frank Slattery has accepted an invitation to join the Board of Directors, while Mr. David L. Jones of Melbourne and Mr. Leonard J. Lawler of Sydney have been appointed to the Research Committee, these appointments are subject to the approval of the C.S.I.R.O.

The Foundation issues a general invitation to persons and interested Societies to submit suggestions of a "specific project or subject" that they would like to see undertaken or supported by the Foundation.

While the Foundation has a moral obligation towards the orchids that are native to Australia, the Directors declare that the definition of the orchid species will broadly cover all species within the orchid kingdom.

The Objects of the Foundation are very broad and embracing that will allow tasks to be undertaken that possibly may be outside the normal workings of the established Orchid Societies.

THE HONOUR ROLL OF CONTRIBUTORS

The Trustees of the Australian Orchid Trust Fund acknowledge with deep appreciation these donors who have contributed to the Fund from July to December, 1976. The Trustees wish to direct special appreciation to Mr. G. Hermon Slade, who has made generous and substantial contributions that has ensured the depth of continuing work that may be undertaken by the Foundation:

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(2) In memory of the late Leo Giles.

(3) In memory of the late John Young.

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Orchids of the Iron Range Area

The results of the joint Australian Orchid Foundation — National Parks and Wildlife Service of Queensland Expedition to the Iron Range area of Cape York Peninsula.

DR. P. S. LAVARACK

INTRODUCTION

Since the publication of Alick Dockrill's *Australian Indigenous Orchids* in 1969, some 15 orchids apparently previously unrecorded in Australia have been found in the Iron Range — McIlwraith Range area. The expedition described here was organised to gather material on as many as possible of these plants and, if possible, to discover additional "new" orchid records for Australia. It was also hoped to gain some knowledge of the orchids and their abundance in this remote area. These data would be useful in planning for the conservation of the orchids of the Iron Range area.

While the Iron Range and McIlwraith Range areas make up one vegetation region, it was considered that the area was too large to be examined on one expedition. For the first of a series of such expeditions the more accessible Iron Range area was the useful starting point. Other possible expeditions may involve two visits to the McIlwraith Range and a wet season study of the Iron Range.

The Expedition was funded jointly by the Australian Orchid Foundation and the National Parks and Wildlife Service of Queensland. The personnel consisted of Dr. P. S. Lavarack, Botanist of the National Parks and Wildlife Service and a member of the Research Committee of the Australian Orchid Foundation; Mr. J. Wrigley, Curator of the Canberra Botanical Gardens and also a member of the Research Committee of the Australian Orchid Foundation; Mr. B. Gray of Atherton, the co-author of several scientific papers on Australian orchids; and Mr. D. Jones, Horticulturist from Melbourne who has published widely on Australian orchids. As well as these full-time participants, the Rev. R. Collins of Atherton and Mr. G. McCraith of Melbourne were present for the latter part of the Expedition. Mr. L. Lawler of Sydney University, an authority on the biochemistry of Australian orchids and Mr. B. Munro also from Sydney were present for much of the work.

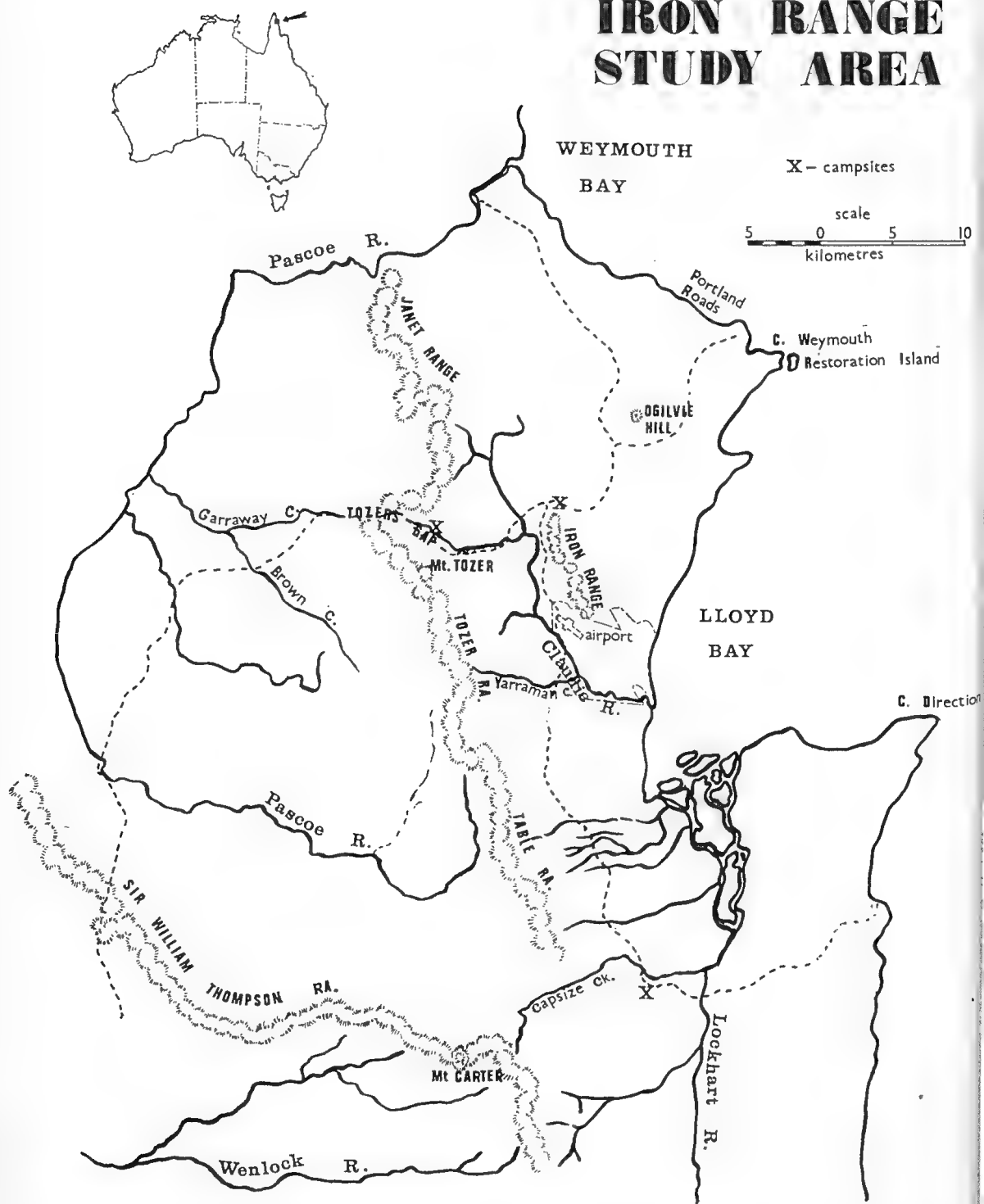
THE IRON RANGE AREA

The area examined on this survey was bounded by the Pasc  e River on the north and west and by Capsize Creek to the south. Iron Range which gives its name to the area is a range of low hills below 200 m in altitude. One of the major physical features of the region is the Tozer Range which reaches a maximum elevation of 550 m at Mt. Tozer. Much of the Tozer Range is at an elevation of about 400-500 m. It is separated from the similar Janet Range to the north by Tozer's Gap. To the south the range decreases in altitude to be a little over 250 m due west of the mouth of the Lockhart River where it is known as the Table Range. Relatively high altitudes are reached again at Mt. Carter (615 m). In many ways Mt. Carter represents both the northern end of the McIlwraith Range and the southern end of the Tozer Range.

The study area encompasses much mountainous country above 250 m altitude. In this it is quite unlike most of the Peninsula which is of low, monotonous relief. Not all the study area is rugged; there is a coastal plain of varying width extending the length of the coast. It is largely comprised of soils derived from granite with patches of Quaternary sand. There are localised patches of rich alluvium along streams such as the Claudie River, Yarraman Creek and Capsize Creek.

The Iron Range area with its relatively high mountains close to the coast has a much higher year-round rainfall than most other places on the Peninsula. The relatively high winter component of the rainfall has allowed the growth of luxuriant rainforest over much of the area. Almost all the upland areas are clothed in dense rainforest which also follows the streams, spreading out in lowland areas where there is a rich alluvial soil. At the Iron Range airfield the average yearly rainfall is 1 980 mm but some areas in the Tozer Range may receive considerably more than this. To the west of the ridgetops the rainfall decreases rapidly and the rainforest is reduced to

IRON RANGE STUDY AREA



smaller patches on rocky hillsides or in sheltered gullies. On the coastal plain, apart from the gallery forests, much of the area supports *Eucalyptus* — or *Melaleuca* — dominated forests. Substantial areas of heath occur on poorer soils and well-developed mangrove communities are present in the

Lockhart River estuary and in other areas. It is the rainforests which are the feature of the area and, with the extensive clearing that has occurred farther south, the Iron Range rainforests are now the largest remaining lowland rainforest on the continent. The area has always been remote. In recent years



Members of the party in the hills near Mt. Tozer. Note the Iron Range Airstrip in the background with extensive areas of rainforest between the airstrip and the mountains. L. to R., P. S. Lavarack, D. L. Jones, J. Wrigley.

cattle property has been established and the Lockhart River Aboriginal Community has moved to a new site near the mouth of the Claudie River, but apart from these recent developments and from the war years when it contained a busy air base, the area has seen only a few miners and prospectors. Apparently no botanist visited this area between the ill-fated Kennedy Expedition of 1848 and the Archbold Expedition of 1948. In more recent years, better access has seen scientific expeditions mounted by various government and private organisations, but the area is still one of the least-known biologically as evidenced by a recent unpublished survey showing that about 10 per cent of trees occurring there are "unknown".

METHODS

The aerial photographs of the area were studied in detail and from these and from previous experience, a list of localities likely to prove rewarding was drawn up. A series of half-day, one-day and two-day trips was designed to visit these areas. Three base camps were planned. These were at Tozer's Gap, Claudie River and Capsize Creek.

Specimens were collected — under permit — both as dried herbarium specimens and live plants. The collection of the latter was restricted to plants required for the Australian native orchid collection at Canberra Botanical Gardens and to plants required for research purposes by various members of the party. In most cases the plants collected were not in flower and it was necessary to grow and flower the plants in cultivation to assure correct identification and to provide a complete herbarium specimen.

RESULTS

Tozer's Gap. The camp was established between two streams flowing down from the nearby Mt. Tozer. From this base the party was close to the upland rainforests of the Tozer Range and the open forests and heath of Tozer's Gap.

The most productive orchid habitat encountered during the Expedition was found on hillsides in the area. Some steep hillsides were made of enormous granite boulders piled one on top of the other. Between these boulders, which ranged in diameter from 1-2 m to about 10 m, were deep crevices making these hillsides spectacular, and extremely dangerous.

Although the conditions on the boulders in the full tropical sun seemed harsh, the high humidity and rainfall and the rough texture of the granite made these rockpiles a most suitable habitat for orchids, 19 different species of which were recorded there. Other plants such as the ant plants (*Myrmecodia* sp. and *Hydnophyllum formicarum*) were also common, along with numerous climbers and pines. Five different species of *Hoya* were seen and the climber *Scindapsus altissimus* was also common. The lack of soil has made it difficult for trees and shrubs to establish although a few large figs were evident clinging to the boulders. On these rockpiles, two as yet unidentified orchids — *Dendrobium* sp. and *Oberonia* sp. — were collected. These both had been collected previously on one occasion only and then from only one limited locality. These recent collections were from areas separated by several kilometres. Both are rare, occurring mostly on the scattered trees.

The *Dendrobium* sp. belongs to the section *Grastidium* and is superficially similar to *D. baileyi*. It differs slightly in the leaf, and has a quite different labellum and perianth. The flowers are pure white and are borne in pairs. The *Oberonia* sp. is a dwarf species similar in size to *O. palmicola* but quite different in floral structure. The leaves are short and fleshy and the inflorescence is orange-red. It appears likely that both these species are undescribed; the unsettled literature on the orchids of New Guinea requires examination in this regard.

Another feature of the rockpiles was some large plants of *Vanda whiteana*. *V. whiteana* is an endemic species (possibly the only Australian species of that genus) and is

restricted to the area between the Pascoe River and Coen. Generally regarded as a rare orchid, the results of this survey showed it to be quite common. It was encountered in several different plant communities during this and preceding visits but certainly attains its best development on the rockpiles, where plants with more than 20 leads are common in some areas. It prefers sunny positions but was also seen in shaded positions. Flowering plants were collected although these were uncommon.

Other orchids seen included some large plants of *Thelasis carinata* and *Ephemerantha comata* which previously were thought, within Australia, to be restricted to the McIlwraith Range. Also common were *Dendrobium bifalce*, *D. luteocilium*, *D. discolor*, *D. smilliae*, *D. teretifolium*, *Bulbophyllum baileyi* (abundant), *B. bowkettiae*, *Phreatia robusta*, *Robiquetia tierneyana*, *Pholidotia pallida* (abundant), *Oberonia muellerana* and *Saccolobium rhopalorrhachis*.

Another orchid previously unrecorded in Australia was discovered near the edges of the rockpiles and in other places in the rainforest. This is a terrestrial species of *Eulophia* with long 15-20 cm pseudobulbs. Other plants of interest in these areas included *Trichoglottis australiensis*, *Robiquetia wassellii* and *Phalaenopsis amabilis* which was common in localised areas. The climbing *Dipodium pandanum* was encountered on several occasions mostly in upland areas while *Dendrobium tetragonum* var. *giganteum* and *D. ruppianum* were common on ridges above 300 m.

Some different and interesting orchids were encountered in specialised environments. The most interesting of these was a *Bulbophyllum* species, in the Cirrhopetalum group, new to Australia. It was found on the crest and sheltered slopes of an exposed ridge. Also common on this ridge were large plants of *Robiquetia tierneyana*, while the small terrestrial *Cheirostylis ovata* was abundant in leaf litter on exposed ridges.

Another interesting orchid only recently recorded for Australia was seen along creeks where they flowed through rocky gorges. Here the diminutive *Cadetia wariana* formed large mats covering the rocks.

Several interesting orchids occurred in the open forests and heath of Tozer's Gap. In the open forests the outstanding orchid seen was an attractive form of *Dendrobium*



Tozer's Gap area showing Mt. Tozer in the background and the heath in the foreground.

canaliculatum which had deep purple tips to petals and sepals and a bright yellow labellum. This form was encountered only at Tozer's Gap. Along creeks in more dense forest several orchids were common; these included *Diplocaulabium glabrum*, *Eria fitzalanii*, *Acriopsis javanica* var. *nelsoniana*, *Luisia teretifolia* and *Dendrobium smilliae*.

Three interesting terrestrial orchids were encountered in swampy conditions. An indeterminate species of *Spathoglottis* was found on several occasions in swampy areas usually under tree cover. The existence of this plant has been known for some time and it is possible that it is a species described from New Guinea. The tall-growing *Bromheadia venusta* was encountered twice on both occasions growing in low dense thickets of shrubs on the margin of swamps. In more open swampy areas in the heath country, the terrestrial orchid *Dendrobium lobbii* is common although difficult to see as it blends in with the sedges. All three species were found growing in one swamp near Brown Creek. Incidentally this and other swamps proved most prolific localities for the pitcher plant *Nepenthes mirabilis*, which traps insects in its jug-like modified leaves.

Claudie River. Camp was established under some mango trees that dated back to an early mining venture. From here the party examined the extensive rainforests fringing the Claudie River and Yarraman Creek. These forests are classified as semi-deciduous mesophyll vine forest and are tall and luxuriant with scattered trees that lose their leaves in the dry season. The ground layer is usually sparse and most orchids are in the tree tops. The exception is the ubiquitous *Sarcochilus*

moorei which often occurs 1-2 m above the ground. The inflorescences which last only a day may be up to 40 cm long. An unusual feature of the flowering of this species is the tendency for all the plants in an area to flower on the same day. The plants are about the size and shape of a large *Phalaenopsis* and have been frequently mistaken for these.

Other common epiphytic orchids observed in these forests included *Dendrobium bifalce*, *Bulbophyllum baileyi*, *Pomatocalpa macphersoni*, *Chilochista phyllorhiza*, *Cadetia maide-niana*, *Micropera fasciculata*, and *Dendrobium stuartii*. Three terrestrial orchids were common in areas not subject to heavy flooding — *Corymborkis veratrifolia*, *Zeuxine oblonga* and *Hetaeria oblongifolia*.

South of the Claudie River some woodlands comprising almost exclusively small trees of *Melaleuca viridiflora* were encountered. These were host to numerous plants of *Dendrobium johannis* and *D. canaliculatum*. The form of *D. johannis* occurring here had large flowers, while the form of *D. canaliculatum* is the variety *nigrescens* but with the flowers tightly packed on the inflorescence and varying widely in colour. One flowering plant of a hybrid between the two was located.

Capsize Creek. From this base camp trips were made to the upper reaches of Capsize Creek and to the Lockhart River mangroves. Capsize Creek yielded nothing exceptional although some plants not encountered elsewhere were seen; these included *Dendrobium nindii*, *Thrixspermum congestum* and *T. platystachys*. The mangroves also proved disappointing with only *Dendrobium rigidum*, *D. discolor* and *Luisia teretifolia* being seen.

A small vine thicket near the mangroves was an excellent orchid habitat supporting large numbers of the following orchids: *Taeniophyllum* species, *Taeniophyllum glandulosum* (syn. *T. wilkianum*), *Dendrobium discolor*, *D. rigidum*, *D. luteocilium*, *D. stuartii*, *Pomatocalpa macphersoni*, *Robiquetia wassellii*, *Saccolabiopsis armitii*, *Chilochista phyllorhiza*, *Sarcochilus moorei*, *Pholidotia pallida* and *Oberonia muellerana*. The most interesting of these is *Taeniophyllum* species which, in Australia, had been collected previously only from the southern end of the McIlwraith Range.

CONCLUSION

While one or two of the collected plants remain to be determined, it appears that no new orchid genus for Australia was con-

firmed. Nevertheless, valuable collections were made of species in the genera *Spathoglottis*, *Dendrobium*, *Oberonia*, *Bulbophyllum*, *Taeniophyllum*, *Eulopia* and *Pomatocalpa*, all of which are new records for Australia. In all instances, these had been collected by the author on previous expeditions but scant material for scientific work was in collections. This Expedition will enable scientific publication at an early date of this material.

Perhaps more importantly, it has been possible to gain overall appreciation of the orchids of the area. This is imperative to the National Parks and Wildlife Service of Queensland in managing the flora of the Iron Range area; timber trees excluded, the orchids are the most exploited commercial component of the flora and thus it is essential to any management authority to be informed appropriately. Little evidence was seen of orchid collecting and indeed the remote and often dangerous nature of the area effectively protects it at this juncture. Some orchids previously thought to be rare were found to be common; *Vanda whiteana* and *Dendrobium lobbii* are examples of this.

In all 66 species of orchid were recorded, some seven of which are either new Australian distribution records or are unnamed. Other species may remain to be found in the Iron Range area although, with the exception of wet season terrestrial orchids, members of this Expedition returned convinced that these remaining species would be extremely well concealed.

ACKNOWLEDGEMENTS

The encouragement and financial support of the Directors of the Australian Orchid Foundation, in particular, Mr. Gerald McCraith, are most gratefully acknowledged as is the co-operation and enthusiasm of all of the people present on the Expedition. A special debt of gratitude is owed to Rev. R. Collins of Atherton who made his four-wheel drive vehicles available to the Expedition even though he was unable to be present for the entire trip.

Messrs. G. Stocker, B. P. M. Hyland and A. Dockrill of C.S.I.R.O. Forest Research Institute, Atherton, provided useful advice based on a detailed local knowledge. Mr. W. G. Whiteman, National Parks and Wildlife Service of Queensland, assisted the Expedition and also drew the map.

Finally, I would express the appreciation

of the members of the Expedition to the Manager, staff and citizens of the Lockhart River Aboriginal Community. The services provided enabled the Expedition to function much more smoothly and efficiently than would otherwise have been possible.

National Parks and Wildlife Service,
C/- A.R.I., Fairfield Road, Yeerongpilly, Qld. 4105

ORCHID LIST OF IRON RANGE AREA

This list includes all the orchids seen or collected during this Expedition. For some of the plants listed no herbarium specimen was collected because these were infertile at the time. Most of these are in cultivation and herbarium specimens will be prepared when these flower.

The species are arranged alphabetically by genus. The areas from which these were collected are shown in the first column by the following code:

Tozer's Gap ridges	T
Tozer's Gap rockpiles	R
Tozer's Gap mixed forest	F
Tozer's Gap and Brown Creek swamps	S
Claudie River lowland rainforest	C
Capsize Creek (upper) lowland rainforest	U
Capsize Creek (lower) lowland rainforest	L
Yarraman Creek lowland rainforest	Y
Lochart River mangroves	M
Lockhart River vine thicket	V
Road to Capsize Creek — woodland	W
Road to Iron Range — open forest	O
Pascoe River area — vine scrub	P

The sign + indicates the species is fertile in September.

As well as the 66 species listed it is also worth nothing that L. J. Brass on the Archbold Expedition of 1948 collected specimens of two additional species: *Liparis habenarina* (F. Muell.) Benth. and *Nervilia discolor* (Bl.) Schltr.

Acriopsis javanica Reinw.

var. <i>nelsoniana</i> F. B. Bail., J. J. Sm.	TFU +
<i>Aphyllorchis</i> species	T
<i>Apostasia wallichii</i> R. Br.	CYLF +
<i>Bromheadia venusta</i> T. E. Hunt.	S +
<i>Bulbophyllum baileyi</i> F. Muell.	TRCFULYP +
<i>Bulbophyllum bowkettiae</i> F. M. Bail.	TR +
<i>Bulbophyllum</i> species	T +
<i>Cadetia maideniana</i> (Schltr.) Schltr.	CYUL +
<i>Cadetia taylori</i> (F. Muell.) Schltr.	T +
<i>Cadetia wariana</i> Schltr.	TU +
<i>Calanthe triplicata</i> (Willem.) Ames	T
<i>Cheirostylis ovata</i> (F. M. Bail.) Schltr.	TP +
<i>Chilochista phyllorhiza</i> (F. Muell.) Schltr.	TPV +
<i>Chilochista phyllorhiza</i> (F. Muell.) Schltr.	TPV
<i>Corymborkis veratrifolia</i> Thou. ex Bl.	CL
<i>Cymbidium canaliculatum</i> R. Br.	O +
<i>Cymbidium madidum</i> Ldl.	FTU +
<i>Dendrobium bifalce</i> Ldl.	CYLR
<i>Dendrobium bigibbum</i> Ldl.	P
<i>Dendrobium canaliculatum</i> R. Br.	W +
<i>Dendrobium canaliculatum</i> R. Br.	
var. <i>nigrescens</i> Nich.	FW +
<i>Dendrobium discolor</i> Ldl.	RCYULVP +
<i>Dendrobium johannis</i> Reichb.	FPW +
<i>Dendrobium lobbii</i> T. & B.	S +
<i>Dendrobium luteociliium</i> Rupp.	RCM
<i>Dendrobium nindii</i> W. Hill	U
<i>Dendrobium rigidum</i> R. Br.	CFULYMOV +

<i>Dendrobium ruppianum</i> A. D. Hawkes	T
<i>Dendrobium smillieae</i> F. Muell.	TRCULYF +
<i>Dendrobium stuartii</i> F. M. Bail.	CYULV
<i>Dendrobium tereitfolium</i> R. Br.	RTCULY +
<i>Dendrobium tetragonum</i> A. Cunn.	
var. <i>giganteum</i> Gilbert	T +
<i>Dendrobium</i> sp.	R +
<i>Diplacaulabium glabrum</i> (J. J. Sm. Krzl.	F +
<i>Dipodium pandanum</i> F. M. Bail.	T
<i>Ephemerantha comata</i> (Bl.) P. F. Hunt & Summerh.	RT
<i>Eria fitzalanii</i> F. Muell.	F +
<i>Eria inornata</i> T. E. Hunt	R +
<i>Eulophia</i> species	T
<i>Geodorum densiflorum</i> (Lam.) Schltr.	PF
<i>Habenaria papuana</i> Krzl.	T
<i>Hetaeria oblongifolia</i> Bl.	CUL +
<i>Luisia teretifolia</i> Gaud.	MC
<i>Malaxis latifolia</i> J. E. Sm.	C
<i>Micropera fasciculata</i> (Lindl.) Garay	CL
<i>Oberonia muellerana</i> Schltr.	MVY
<i>Oberonia palmicola</i> F. Muell.	T
<i>Oberonia</i> sp.	R
<i>Phalaenopsis amabilis</i> Bl.	T
<i>Pholidotia pallida</i> Ldl.	RTMCULYF
<i>Phreatia robusta</i> Rog.	RT
<i>Pomatocalpa macphersonii</i> (F. Muell.) T. E. Hunt	CYULV +
<i>Pomatocalpa</i> species	C
<i>Robiquetia tierneyana</i> (Rupp) Dockr.	TR
<i>Robiquetia wassellii</i> Dockr.	TVLC
<i>Saccolabiopsis armitii</i> (F. Muell.) Dockr.	PV
<i>Saccolabium rhopalorrhachis</i> (Reichb. f.) J. J. Sm.	TR
<i>Sarcochilus moorei</i> (Reichb. f.) Schltr.	CYULV +
<i>Schoenorchis densiflora</i> Schltr.	T
<i>Spathoglottis</i> species	FS
<i>Taeniophyllum glandulosum</i> Bl.	YVT +
<i>Taeniophyllum</i> species	V +
<i>Thelasis carinata</i> Bl.	RT +
<i>Thrixspermum congestum</i> (F. M. Bail.) Dockr.	U
<i>Thrixspermum platystachys</i> (F. M. Bail.) Schltr.	UL
<i>Trichoglottis australiensis</i> Dockr.	RT
<i>Vanda whiteana</i> Herbert & S. T. Blake	RUT +
<i>Zeuxine oblonga</i> Rog. & C. T. White	CL +

SHOALHAVEN O.S. HONOURS NADA WATTS

Fourteen years is a long time to devote selfless service to an orchid society. For this period, and until a few months ago, Mrs. Nada Watts was honorary secretary to the Shoalhaven Orchid Society.

During this time the hard work and devotion to duty of Nada Watts has been a major factor in making the Society influential in the cultural life of Nowra, N.S.W.

In her work for the Society Nada Watts has left nothing to chance and no task for the benefit of members was too great. She could not tolerate failure and no failure came her way. Because of her efficiency the Society prospered.

With regret Nada has had to ease her work load and it is wished by all that this gives her more time just to enjoy her orchids.

In grateful recognition members unanimously voted to confer Life Membership upon Nada Watts, and as President Apperley said "it could not go to a more deserving person".

God Almighty first planted a garden, and indeed it is the purest of human pleasures.
— Bacon.



▲ *Vanda whiteana* growing on a granite boulder on one of the "rockpiles".

Iron Range Finds

▲ A typical scene on one of the "rockpiles". Orchids in evidence include some large plants of *Eria inornata* on the right and the very abundant *Bulbophyllum baileyi*.



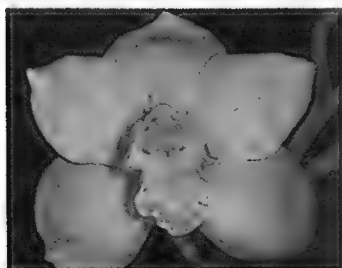
▲ *Sarcochilus moorei*. A very abundant orchid of the humid lowland rainforests.

▼ The unusual colour form of *Dendrobium canaliculatum* which occurs in the Tozer's Gap area.



CYMBIDIUM OF THE YEAR

AOC 1975/76



◀ETTA BARLOW 'OPALESCENT'

FCC/RHS, HCC/AOC-OSNSW

Judge's Description: "... slightly arching raceme with eight well-displayed flowers arranged attractively and evenly. Background colour of sepals, petals and labellum yellow-green. All segments edged with red and the labellum having a deep yellow colour in the throat. Points allotted 79.5". One more flower would have meant an AM for the owner, Mr. J. Lambert.

MIN. 30 CM LEAF LENGTH \$15
B & L (MAY FLOWER NEXT YEAR) \$20

COMMUNITY POTS

Our community pots (5 pint) contain 10 superbly grown Cymbidium plants which have been grown for at least six months in our shade houses. Each plant has a full complement of leaves, alive right to their very tips. Leaf length is over 15 cm and each plant has a magnificent root system. Community pots are ideal for those who require a number of plants, but less than the 25 in flasks and for those who prefer not to handle a flask. We can provide any number of plants of even size for Orchid Club growing competitions.

MERICLONES

7302	PHARAOH 'REYNELLA'. A pure white pure-colour — one of our favourite Pharaohs. Large flowers on strong stems in July	\$50
7306	PHARAOH 'ALMIGHTY' 4N. The big prize winner of the 3rd Australian Orchid Conference Show. August flowering white	\$60
7401	KATYDID 'VERIDIAN'. April flowering concolour green miniature — free-flowering and very decorative	\$40
7404	SAN MIGUEL 'MAY DAY'. Show winner on the 5th May. Long upright spikes of deep-green flowers	\$40
7406	SLEEPING QUEEN 'REYNELLA' 4N. See picture right. One of the prettiest Cymbidiums we have ever seen	\$50
7407	VALLEY GEM 'MAYFAIR'. Beautiful, highly productive, August flowering yellow with electric green flush	\$50
7409	LAGOON 'VALLEY HIGH'. Best export Cymbidium October, 1974. Top quality white always late flowering	\$50
7501	DR. LLOYD HAWKINSON 'PIEDMONT' HCC/AOC. Outstanding show-bench green	\$40

SEEDLINGS

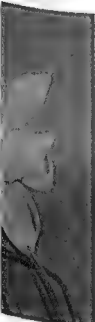
03	PHARAOH 'KING OF KINGS' x SLEEPING DREAM. (50% pure colour). The S.D. is coloured and is the most shapely and heavy substance of all pure colour factor carrying studs we have seen	\$30	
04	SLEEPING DREAM 'GOLD RUSH' x SLEEPING BEAUTY 'BUTTERCUP'. (100% pure colour). Two intense yellows. The S.B. is from S.B. 'Sarah Jean' x S.B. 'Giant'. Expect beautiful intense yellows	\$30	
06	PHARAOH 'KING OF KINGS' x SLEEPING BEAUTY 'BUTTERCUP'. (100% pure colour). Expect quality yellows — whites	\$30	
08	SLEEPING DREAM 'GOLD RUSH' x SLEEPING QUEEN 'REYNELLA'. S.D. 'Gold Rush' is our brightest yellow pure colour — all seedlings will at least carry the pure colour factor	\$25	
09	CORAKI x CLEO'S MELODY. Here's colour — expect brilliant yellow triploids with good spike habit. Cleo's Melody has all the shape needed to enhance the fine Coraki	\$35	7501+C
11	PHARAOH 'KING OF KINGS' x SLEEPING QUEEN 'REYNELLA'. As with cross number 408, made to improve the pure colour strains. All progeny will carry pure colour factor	\$25	7505+C
12	ZUMMA BOYD 'GREENLAND' x WYANGA 'ELANORA' HCC, AD/NSW. Another P.C. strain improvement cross. Quality intense coloured greens spread throughout the season	\$25	
14	BALKIS 'CAPT. ANDERSON' AM/NSW x VALLEY HEIGHTS 'DECEMBER'. Late whites. The ones that make show time will acquit themselves well	\$25	7509+C
16	PEARL BALKIS 'PINK PERFECTION' HCC/AOC, OCSA — Australian "Cymbidium of the Year 1974" x VALLEY FLOWER 'CHERRY RIPE'. This is THE cross to produce the future pink tetraploid show and award winners	\$40	7524+C
17	DURHAM CASTLE 'MEM. W. W. KAVANAGH' x SYLVANIA 'PINK CASCADE'. Two early brightly coloured pinks — prize winners in 1st week of May and July respectively. Expect early pinks of quality	\$25	7527+C
18	VALLEY FLOWER 'CHERRY RIPE' x SYLVANIA 'PINK CASCADE'. Quality tetraploid pinks — some early	\$30	7528+C

Ultra early
Parent of

Typical of
Specimen
Sh



Community pots.



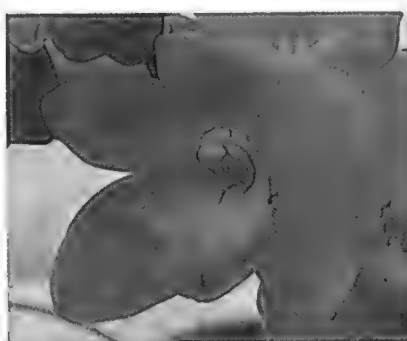
pure-colour. 4th seedling



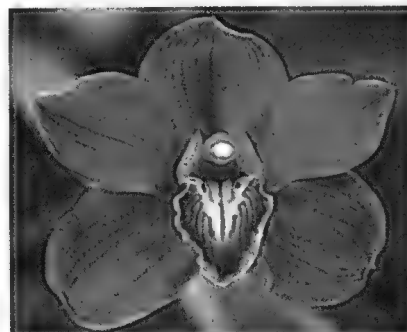
which won all the 4th AOC awards.



COMMUNITY POTS
Our community pots are the best value.



SLEEPING QUEEN 'REYNELLA' 4N
Mericlones and seedlings available in community pots — see list.



SENSATION 'MELITA' HCC/AOS
Outstanding parent seedlings in flask available — see list.

OUR CYMBIDIUM FLASKS

25 PLANTS IN FLASK — MOST READY NOW
TRAGOLD 'AM/RHS x SLEEPING DREAM 'GOLD RUSH'
 Our two awarded pure-colour yellows. Good shape and should be triploids, the remainder hexaploids. Colchicine-treated. (See picture far left) \$100
ELANORA' x PHARAOH 'GREEN CASCADE' (100% P.C.). The uranium. Ultra early. See picture on page 4 for quality. Colchicine-treated. (See picture far left) \$80
AD-EA/NSW x (Wyanga x San Miguel) (50% P.C.). Expect spread throughout the season. Colchicine-treated \$60
'Elanora' AD-EA/NSW x Sussex Dawn 'Dorothy May' of an outstanding cross of which so few clones exist. throughout the season. Colchicine-treated \$80
WN' x SUSSEX DAWN 'DOROTHY MAY' (25% P.C.). The th the Melingas and the Sleeping Beautys combined. greens and yellows. Colchicine-treated \$60
GLE' x SUSSEX DAWN 'DOROTHY MAY' (50% P.C.). and yellows of top quality. Combines the quality of the colours. Colchicine-treated \$80

STANDARD CYMBIDIUMS — FLASKS

- 7424+C 25 PLANTS IN FLASK — MOST READY NOW**
SUSSEX CASTLE 'MELITA' HCC/AOS x TAPESTRY 'RED GLORY'. 'Melita' is probably the most famous of all the Sensations. 'Red Glory' (Khyber Pass x Voodoo) is a magnificent vibrant red of rich plush-like quality. The colour is a gorgeous rich, deep, dark, dahlia red with a very broad white lip banded blood red. It has long arching spikes of 15-18 blooms. The predicted result of the cross is well proportioned, shapely, show bench type, deep red blooms. Colchicine-treated. (See picture) \$80
7504+C SUSSEX CASTLE x MELINGA 'RUM JUNGLE'. Pure-colour strain improvement cross. Expect ultra early (May). All progeny will carry P.C. factor. Colchicine-treated. (See picture far left) \$50
7506+C WYANGA 'Supreme' x Wyanga 'Elanora' AD/NSW. To improve the green pure-colours. All progeny will at least carry P.C. factor. Expect intense greens — some early. Colchicine-treated \$50
7507+C WYANGA 'SUPREME' x SLEEPING LAMB 'GOLDEN FLEECE'. Expect very early yellows and greens. All will at least carry P.C. factor. Colchicine-treated \$50
7508+C MELINGA 'RUM JUNGLE' x WYANGA 'SUPREME'. Similar to above but ultra early. Colchicine-treated. (See picture far left) \$50
7513 LUNAGRAD 'ELANORA' 4N x VALLEY PEARL 'REYNELLA'. All tetraploids. Expect highest quality show and stud plants, June-October, in pinks, greens, yellows. (See picture Dec., 1976 A.O.R.) \$50
7535+C SENSATION 'MELITA' HCC/AOS x BEXLEY RADIANCE 'BEXLEY'. Expect bright reds — half will be tetraploids — they will startle the world. Colchicine-treated. (See picture left) \$60
7536+C NGAIRE 'KURINGAI' x SIRAM 'MAXINE'. Shapely early greens, pinks and mainly polychromes. Colchicine-treated. (See picture top left) \$50
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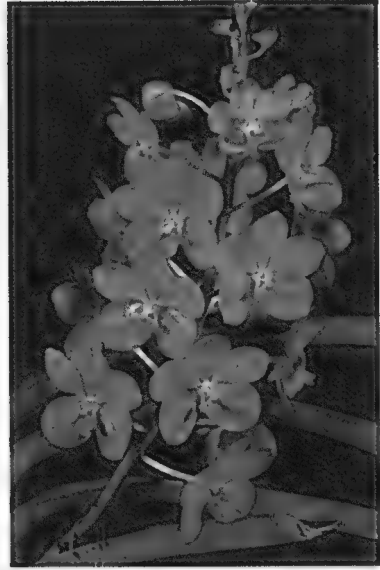
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HORMONE NODE CULTURE OF PHALAENOPSIS

KEVIN McFARLANE

I'm excited by the results I have been getting with a hormone growth paste on my phallies.

During recent trips to Hawaii I learnt that two American firms had produced hormone paste for developing keiki plantlets on phalaenopsis flower stem nodes.

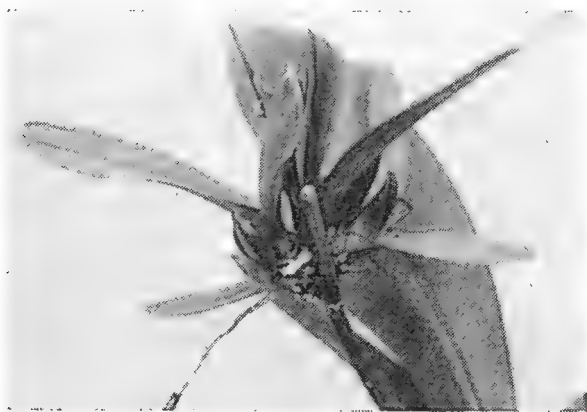


Figure I

These two firms are: John Ewing Orchids Inc. of P.O. Box 384, Aptos, California 95003, and Hill's Orchid Lab of P.O. Box 1184, Ontario, California 91762. John Ewing markets it under the name "hormone flower spike paste" and Hill's call it "chemical paste for germinating keikis on phalaenopsis nodes". Both charge \$US10.00 plus \$3.00 air freight.

In a spirit of adventure I sent for some.

It has proved for me an intriguing and very simple way of inducing keikis.

To apply it is first necessary to remove the bract covering one of the nodes on a flowering stem. Using a razor blade with great care I cut down the centre of the bract and pull the two sides away from one another. Then I simply brush a little of the paste around the node.

Reaction is almost instantaneous and next day you can see the node swelling.

Sometimes the node will produce a flower spike instead of a keiki. If this occurs re-apply the paste fourteen days after the first application and also apply to the nodes on the branched spike.

I found that re-action was faster on an immature stem — one on which the flower buds haven't opened and the spike hardened.



Figure II

Figure I shows development of plant at five months. At this stage seven keikis had developed, some measuring 25 cm tip of leaf span. Note the nice roots coming away. A little later on this stem was cut about 12 cm below the plantlets and placed in a 15 cm pot for planting out later as mother roots became apparent.

Figure II shows two plantlets, on another stem, just five months old and coming in spike. Note that no roots have emerged and in fact some keikis have proved slow in this respect. I have been using "Formula 2" to encourage root growth but would like to have something more forceful so the plantlets could be taken off the stems sooner. This would place less strain on the mother plant although I haven't noticed any adverse effects so far because my plants were in good condition to start with. Perhaps a rooting hormone paste would be ideal.



Figure III

Further experiments proved extremely interesting in that they showed differing reactions with some plants. This could be because of me being a bit heavy-handed when applying the paste in some cases.

All sorts of crazy things happened. Some formed a callus with dozens of tiny keikis trying to emerge. Experimentally I put a razor blade cut through one callus in three places and applied a little more paste. This caused further development and the emergence of many more plantlets which eventually died, and only the two largest keikis continued their growth.

Provided the growth of fungus could be controlled I feel sure that with a little time and patience a very fresh piece of the callus could be successfully flaked and grown on like mericlones.

In another case all the plant wanted to do was put out flower spikes. By ascertaining optimum applications and conditions for this application it could have some merit for growers in the cut flower business, controlling timing and lengthening seasons.

Figure III shows a stem with callus and



Figure IV

lots of tiny keikis six weeks after applying paste. Figure IV shows branching flower stem and commencement of a keiki.

If you are disposed to try this paste remember that simple care is required to prolong shelf life. It should be stored in the lower part of a refrigerator, kept out of light, and stirred well before use.

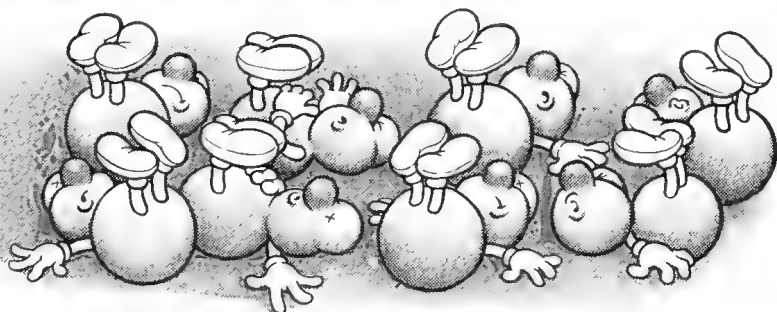
Conclusions

This simple technique has great potential, especially for the amateur grower who can very quickly have new babies off his favourite phalaenopsis, and thus offset the heartache of the one and only plant getting crown rot or some other disease. It would be good and cheap insurance to propagate a champion.

The amazing speed of growth engendered by the paste indicates some interesting applications. I have found that some phalaenopsis keikis are actually flowering size five to seven months after application. This would greatly assist a breeding programme by having a number of plants of the same clone available simultaneously and quickly. It could also enable a grower to propagate outstanding plants for sale, something which to date has been difficult.

Lastly, what are the possibilities with other genera? However, I will leave that story for another issue.

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NORTH COAST (Q.) HOSTS S.T.O.C.

On Saturday, 14th February, the North Coast Orchid Society hosted the annual meeting of the Sub-Tropical Orchid Council at Palmwoods, a picturesque town set among the hills a few miles from Nambour in Queensland. Approximately a hundred members were present, producing a large array of blooms both hybrid and species.

Popular vote winning plants were *Ren. Brookie Chandler* x *Phal. Spring Showers*, *Paph. concolor*, and *Den. gibbum*.

Judges choices were *Cat. Ashgrove 'Cecil'*, *Cat. bowringiana* x *C. loddigesii*, and *V. Kalama Maui*.

A lecture entitled "Atmospheric Conditions for Growing Orchids" was given by Q.O.S. guest Mr. Chas. Hill.

The President elected for the year 1976 was Mr. S. Henry (North Coast); Vice President, Mr. M. Clench (Caboolture), Secretary, Mr. B. Matthews (Maryborough), Treasurer, Mr. M. Gosley (Maryborough), Registrar, Mr. D. English (Gympie), Ass. Registrar, Mr. W. Patterson (Gympie), Ass. Sec. and Publicity Officer, Mrs. R. Ditchmen (Maryborough), Auditor, Mr. J. Pittard (Maryborough).

Suggested venues for the year's meetings: Gympie 1st May, Maryborough 24th July, Bundaberg 8th and 9th October, coinciding with Sugar Festival.

Man with all his noble qualities — still bears in his bodily frame the indelible stamp of his lowly origin. — Darwin.

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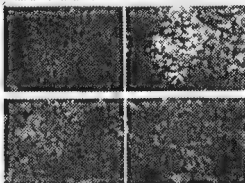
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Compost of Sawmill Wastes for the Cymbidium Grower

G. E. IRONSIDE, *Research Officer, Forestry Commission of N.S.W.*

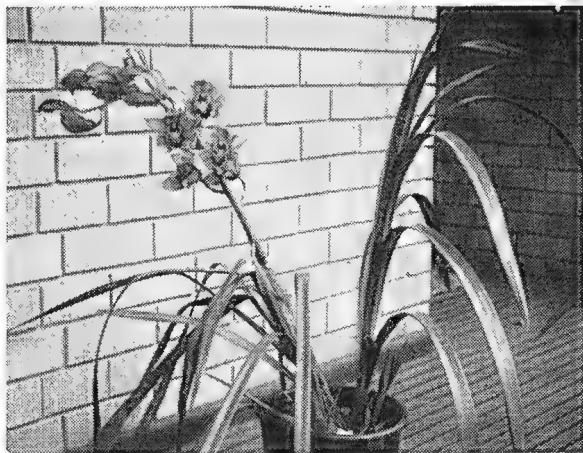
For the suburban orchid enthusiast it is relatively easy to drive round to the nearest nursery to buy a bag or two of commercially produced compost, as need arises. The rural grower does not have this advantage, yet his disability could be more apparent than real.

Imported peat has long been among the most expensive constituents of cymbidium growing media and recent ocean freight increases have had a disproportionate effect on its cost. Peat deposits in the northern hemisphere are vast, but by no means infinite. Already there are warnings that much of Ireland's supplies will have been eliminated by the turn of the century. Yet such prediction takes no cognizance of political action on environmental grounds. In Ireland and Poland, concern has been expressed regarding the adverse effect of peat exploitation.

Dotted around New South Wales are several hundred hardwood sawmills generating tonnes of residues as unmarketable waste. Chipping for pulp production offers the most economic and environmentally attractive end-use for the larger pieces of solid timber. But, paradoxically, once such a solution is achieved, the disposal problems associated with the remaining residues — sawdust, bark and 'mudguts' — become more acute owing to malfunction of burners designed for a different fuel mix. Consequently, an investigation into the possible uses of these ultimate residues led to the production, by a simple composting technique, of a growing medium suitable for pot culture of cymbidiums — the grower's answer to accelerating prices of peat.

Typical samples of these ultimate residues were collected from a sawmill currently enjoying a high degree of utilisation because of its proximity to the steelworks and coalfields. With a market for dunnage, firewood and clean sawdust, the amount of actual waste was minimal, consisting in approximately equal proportions of sawdust, bark and 'mudguts'.

Though familiar to loggers, the latter term may need some elucidation. Commonly, the core of overmature eucalypt logs is hollow and is packed with a dense mud-or putty-like substance — hence the colloquialism. This material is resistant to further biode-



Plant growing in Mr. Ironside's compost. Doubtless many would like to try it. Mr. Ironside advises that some sawmills are quite close to capital cities. In Sydney the nearest are in the Windsor area. If you have difficulty finding one, contact your nearest Forestry office.

gradation being primarily the faecal deposits of tree-dwelling termites. Normal mill practice is to 'box-out' the heart, retaining the mudguts in a sleeve of timber, but this particular mill residue is more readily accessible where the breakdown cut is made through the middle of the log — spilling the mudguts onto the floor prior to disposal.

The sawdust was dirty, being mainly scrapings off the mill floor. The bark, much of it fibrous or subfibrous from stringybark and blackbutt, had been collected from around the mill yard where it had flaked off the logs. It was contaminated with soil picked up during extraction in the forest and subsequent handling.

In preparing the residues for composting, they were passed through a hammermill fitted with a 16 mm screen. As this mix appeared to be too heavy, 1 part fresh sawdust to 4 parts milled residues was incorporated prior to treating with the following additives:

Urea	2.0 kg/m ³
Potassium nitrate	0.2 kg/m ³
Single superphosphate	0.6 kg/m ³
Dolomite	1.5 kg/m ³
Lime	3.0 kg/m ³
Water	120.0 litres/m ³

The first three items were applied as a

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solution in the water after the other three, finely ground, had been mixed in dry. The amount of additional water was based on the oven-dry content, the aim being to achieve a moisture content of between 80 per cent and 120 per cent (i.e. dry weight basis). At that level the ingredients felt damp to the touch, but not so wet that water could be easily squeezed out by hand.

After mixing, composting took place naturally in about three weeks. Being a laboratory scale experiment, composting was carried out in expanded polystyrene picnic containers to simulate, as far as possible, conditions pertaining to a larger pile outdoors but protected from the weather. At the end of the first and second week, the composting material was turned out of the container and mixed to aerate. By the end of the third week the temperature of the compost had dropped to little above ambient, indicating that the first phase of the composting was complete. The cymbidium growing medium was completed by mixing 1 part fine sand to 6 parts compost.

In October, 1975, two cymbidium plants (La Novia 'Mona Vale' and Wollar 'Edgar') were divided immediately after flowering, yielding two and three divisions respectively. These divisions were potted in nine litre plastic pots, three in the mill residue compost and two in a good local commercial cymbidium mix as control. They were grown-on under light shade cast by a large turpentine.

Weekly feeding with a 1/1000 w/w aqueous solution of a proprietary fertilizer (18:12:18 plus trace elements) commenced in January and continued to mid-June. Initially there was no detectable difference between the plants in the two media but, by June, Wollar in the mill residue compost were markedly stronger than the same clone in the commercial mix. Results of flowering at the end of the first growing season are summarised below:

Clone	Compost	Spikes	Flowers
La Novia	Commercial	1	11
La Novia	Mill	Nil	Nil
Wollar	Commercial	1	9
Wollar	Mill	1	14
Wollar	Mill	1	15

On completion of flowering, the plants were removed from the pots for examination of the roots, which were found to be healthy. Both composts were deemed fit for a further year's use without replenishment.

Further success in composting mill residues of the above type has been achieved by using the following mixture:

- 1 part by volume dried cow manure
- 1 part by volume dried poultry manure
- 10 parts by volume milled residues
- 3.3 kg/m³ dolomite
- 100 litres/m³ water.

It is thought that this too would be satisfactory for cymbidium culture on a 6:1 mix with fine sand. At normal retail store prices, the artificial fertilisers are less expensive than the farmyard product, but such consideration need not necessarily apply in country areas.

Where mill residues are available as separate entities, two other composts may be of interest. One consists of 3 parts hardwood sawdust by volume plus 1 part hammermilled stringybark. The other is made up of 4 parts sawdust, 3 parts stringybark, 2 parts mudguts and 1 part fine sand. A supplement per m³ of sawdust of 2.1 kg lime, 2.5 kg urea and 90 litres water has to be added in addition to the normal fertilisers used in such soilless mixes. Our trials, based on UC (University of California 1957) recommendations, used 150 g potassium nitrate, 150 g potassium sulphate, 1.2 kg single superphosphate, 3 kg dolomite and 2.4 kg lime per m³ of mix.

After storage in polythylene bags for one week, the mixes were ready for use without sterilisation. These mixes have a low bulk density, take up water well and have good drainage and water holding capacity. They gave satisfactory growth with a wide range of indoor plants and container-grown trees, including many Australian natives (Ironsides 1976) and would appear to have all the attributes of a first class cymbidium compost.

Sawmill residues are a renewable, natural resource, cheap and readily available throughout the year. By utilising them the orchid grower can play his small part in reducing pollution in his own environment with considerable benefit to his pocket. He would be using ingredients which are akin to the growing media of his plants.

References:

Ironsides, G. E. (1976) — 'Potting composts from eucalypt mill wastes by accelerated maturation technique'. J. Aust. Inst. Hort. 2(3): 14 - 20.

University of California (1957) — 'The U.C. system for producing healthy, container-grown plants'. K. F. Baker (ed.), Uni. of California, Manual 23.

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The organising committee and members of the Orchid Society of West Australia are determined to show that all that easterners have heard about Westralian hospitality is true.

John Foley, Chairman of the Organising Committee, is pleased to report a very encouraging response to the pre-registration form. Indications are that there will be registrants from the U.S.A., South Africa and New Zealand.

Registration Forms are now being distributed to pre-registrants and will be freely available at Societies.

IMAGINATIVE PROGRAMME

The Conference programme is designed for enjoyment and only in one area is there a clash of interests. The Australian Orchid Council Meeting and the tour to El Caballo take place on the same day, Wednesday 14th, but this will not affect most registrants.

Setting up, judging and registration are on Sunday 11th. Next morning the Show is open to registrants only, and is officially opened at 2.30 p.m. by His Excellency Air Chief Marshall, Sir Wallace Kyle. There is a Cocktail Party at 6 p.m.

Tuesday is devoted to papers and a judging seminar. Thursday to papers with a Kings Park tour in the afternoon. A special feature will be entertainment of visitors by local growers at their homes on Thursday evening.

Friday is for tours or relaxation and in the evening a special Orchid meeting has been arranged in conjunction with the W.A. Trotting Club. Saturday morning marks the closing ceremony and presentation of minor prizes. The major prizes will be presented at the Banquet on Wednesday evening.

The Conference concludes on Saturday evening with an informal Buffet Supper and Dance.

TOURS

Apart from local one-day and two-day tours there will be two pre-Conference tours to Geraldton and the Wildflower country and a post-Conference tour of the picturesque South-West.

A post-Conference tour to Singapore, with time for orchid visits including the famous Mandai Orchid Gardens and the private collection of the Sultan of Johore, is sche-

duled to leave on Sunday, 11th September. The tour cost is based on a round trip from any Australian capital via Perth and Singapore and the price varies according to the capital. Perth-Singapore-Perth is cheapest at \$596 twin and \$668 single accommodation, with Adelaide dearest at \$812 and \$926. In general the cost is not very much more than a Brisbane or Melbourne to Perth return and the bonus is eight or nine wonderful days in Singapore.

The pre and post tours mentioned above are each for four days in air conditioned coaches and include all meals. The cost of each with twin share accommodation is \$139.

Brochures with full details of the above tours may be obtained from Convention Coordinators, P.O. Box 7009, Cloisters Square, Perth, W.A. 6000.

VENUE AND PRICE CONCESSIONS

All Conference activities will take place at the Sheraton-Perth, undoubtedly one of Australia's finest hotels, where a special rate has been arranged for registrants. This is \$28 per day for twin accommodation and \$22 for single, and does not include meals. Each luxurious room has tea and coffee facilities and colour television. There are fine public rooms, a superb cuisine, and charming views over the city and river.

REGISTRATION FEES

If paid before the 30th June concession rates apply, namely \$25 single and \$40 double. Late registration is \$30 single, \$40 double. A lower rate, not yet announced, will be available for wives or friends who do not wish to take part in the whole programme.

AIR, RAIL AND BUS FARES

Return concession air fares from Sydney or Melbourne will be in the vicinity of \$320. Brisbane-Perth and Hobart-Perth will be dearer, and Adelaide-Perth cheaper. Check with your State Society regarding concession arrangements. The discount for parties is substantial and you have the advantage of travelling with kindred spirits.

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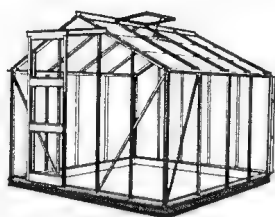
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Orchids of the Wildflower State

P. R. WYCHERLEY

Director of Kings Park

Western Australia is sometimes called the Wildflower State because of the brilliant displays of Spring blooms, many of species endemic to the South-West. Flowering starts in the North-West during August and the peak flowering season sweeps southward reaching the South Coast in October, passing Kalbarri and Perth in early and late September respectively. Nevertheless some interesting species such as the Black and the Golden Kangaroo Paws flower in the sandplains north of Perth rather later in the year. Apart from such species running earlier or later than the majority, there are variations from year to year, sometimes the season is advanced or retarded.

Kings Park and Botanic Garden is always open and over 1,200 species of Western Australian plants are on display during the year. The Wildflower Exhibition usually opens on the last Friday in September, cut wildflowers from all over the State are shown in addition to cultivated native plants.

Western Australia has relatively few wild orchids compared with most other parts of the world except the arctic. Orchids are almost entirely absent from the Ereman or desert region which makes up the greater central part of the State. A handful of epiphytes and one or two terrestrial species occur in the humid tropical North-West near the coast. There may well be some more undiscovered orchids in these parts, which are still largely unexplored. Most of Western Australia's 150 orchids are tuberous terrestrial species occurring mainly in forests and woodlands in the South-West, but some grow in heaths and swamps. The climate here, is typically Mediterranean, cool wet winters and hot dry summers, although there is considerable variation in the length of the wet and dry periods and in the average annual rainfall from 300 to 1 500 mm.

About twenty species of orchids are found in the bushland of Kings Park. They are usually most conspicuous in areas burnt the year before, although too frequent burning is often detrimental. Flowering starts in Winter, about half the species in Kings Park flower

during August. As well as late blooms of these species, about half a dozen including some of the most attractive flower in September.



MELVILLE ORCHID SOCIETY (W.A.)

Conference Curtain Raiser

The Melville O.S. Spring Show is the curtain raiser for the Fifth Australian Orchid Conference. It will be held on Saturday 3rd and Sunday 4th of September, just one week before the Conference starts.

Conference registrants will be well rewarded by arriving a week early. The Melville folk are all set to fraternise and you'll need all those week days just to see all the sights of Perth.

Melville O.S. ended 1976 just one year and nine months old and a membership of 90. The Spring was a marked floral and social success — and attracted many new members.

Show Champion was *Cymbidium* Clarisse Carlton 'Toreador' owned by Mr. and Mrs. Fleming, and Best Other Genera went to *Phalaenopsis*. Spring Showers entered by Mr. and Mrs. Gale. Those husband and wife teams always make for a pleasant society.

Plan to enjoy Melville hospitality in September, 1977. Details from Mr. I. Bailey, 33 Waddell Road, Palmyra, W.A. 6157.

ARE YOU AFTER BACK COPIES?

Mr. Ken Rex of West Aussie has 87 issues dating back to 1940 he wants to swap. The issues he wants are Nos. 1, 2, and 4 of the first year of publication, 1936, and all issues of the year 1945. All 87 copies are too many to list here but write to him at 107 Hayes Avenue, Mt. Yokine, W.A. 6060.

ORCHID BEGINNERS' CLASSES

The Norwood College of Further Education of South Australia is currently conducting a Tuesday night course in orchid growing. This commenced on 21st February and continues for another five weekly lectures from that date. This is the second such series. If you missed the first two, contact the College by writing to the Principal at 45 Osmond Terrace, Norwood. Phone 332-1366.

The N.S.W. School of Horticulture at Ryde conducts a class in the second half of the year, and has done so for many years. The School is at 59 Parkes Road, West Ryde. Phone 807-3755.

Since our previous advertisement the price of chemicals and agar for nutrient solutions has risen by approximately 45%, but our prices including postage and packing are still the same for all nutrient media. So don't blame inflation or devaluation for not flasking your own seed or meristems.

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Dendrobium Conantherum; D. Discolor; D. Lineale (from Bougainville, May River and Wulai Island); D. Musciferum; D. Warianum; D. Streblosceras (Tangerine).

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NINTH WORLD ORCHID CONFERENCE

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Several organised group tours to the Ninth World Orchid Conference at Bangkok in January, 1978, are available. They vary in time from two to four weeks, and in cost from around \$1,000 to around \$1,500. Even the short ones offer a range of experience that will enrich your life forever.

Currently definite schedules are available from the Orchid Club of South Australia in conjunction with the Australian Orchid Council, the Orchid Society of New South Wales, the Orchid Society of West Australia and Sydney's North Shore Orchid Society. The Tropical Queensland Orchid Council is also arranging a tour. There has been discussion regarding a Victorian organised tour and one by the Queensland Orchid Society, but details are unavailable to date. Should further data come to hand it will be published in the June issue.

AUSTRALIAN ORCHID COUNCIL TOUR

This was initially organised by the Orchid Club of South Australia but has now become the Australian Orchid Council tour since it will be led by the A.O.C. President, Mr. Syd Monkhouse.

The itinerary is extremely interesting and covers a period of just over three weeks, from Monday, 9th January, to Wednesday, 1st February. First call is at Manilla for three days, then Hong Kong for four. Some day tours and entertainments are included at both cities. Then on to Bangkok, arriving Thursday, 13th January. The next six days are devoted to the Conference and various half-day and day tours at the individual's choice and expense.

On Thursday the 26th, participants leave for Singapore. Friday is spent on an orchid tour and sightseeing, then the party leaves for Daipason in Bali. After three days in this paradise an overnight flight leaves for Sydney, arriving Wednesday morning, 1st February.

The cost varies from each capital city and prices quoted are for shared twin accommodation. Single accommodation is extra. It includes full breakfasts but only a few of the other meals.

Prices are not firm but subject to inflationary adjustments. The current figures are:

from Adelaide \$1,333, Brisbane \$1,216, Hobart \$1,350, Melbourne \$1,281, Sydney \$1,184 and Canberra \$1,229. Concession rates are available for children.

For full details of this tour apply to Mr. H. B. Williams of Jan Springett's Travel Centre, Stafford House, 23-25 Leigh Street, Adelaide, S.A. 5000. Tour arrangements are by the Travel Centre and Jetset Tours.

ORCHID SOCIETY OF N.S.W.

Two tours are being organised, one of two weeks and one of four weeks.

The short tour leaves Sydney on Tuesday, 18th January, and stops overnight in Singapore before going on to Bangkok. Return is via Hong Kong with time for sightseeing, then non-stop to Sydney. Cost is \$1,059 twin, single \$198 extra.

The long tour departs on Monday, 9th January, for Singapore which they explore for four days with the Hilton as base camp. Day tours and entertainment are included. On the 12th, the party go by coach to Malacca and Kuala Lumpur, then by air to Penang.

On the 16th they will arrive at Bangkok and be accommodated at the Dusit Thani Hotel which is Conference headquarters. A feature is that participants arrive in time to undertake a three-day pre-Conference trip to jungle areas. This could cost up to U.S.\$175 for two people — less for a larger group. There are also numerous day and half-day tours at U.S.\$5 to \$19.

After the Conference three and a half days will be spent in Hong Kong, then on to Taipei in Taiwan for two days. Three days will be spent in Manilla, arriving back in Sydney on Monday, 6th February.

The cost includes tours in each city, full breakfasts but not most lunches or dinners.

Cost from Sydney to Sydney is \$1,469, covering economy air travel and first class hotels. For full details contact Mr. MacDonald of Jetset Tours, 99 Elizabeth Street, Sydney, N.S.W. 2000.

ORCHID SOCIETY OF WEST AUSTRALIA

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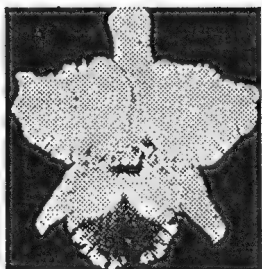
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Hand-washed Colour Prints, \$1.65 each, Folders same, 85c each.

Hand-washed Colour Prints in Book Form also available.

All prices plus postage from England. Further enquiries welcome, and prices can alter.

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January, and go via Kuala Lumpur to Bangkok. In Bangkok three one-day tours are included.

After the Conference one tour returns via Hong Kong arriving back in Perth on Sunday, 29th January. Cost with twin accommodation \$856, single \$954.

Another returns via Kuala Lumpur with no stopover. Cost twin \$763, single \$828.

The third option is a stay of two days at Singapore, returning to Perth on the 29th January. Cost twin \$763, single \$954.

For full details contact V.U. (International) Pty. Ltd., S.G.I.O. Building, 815 Hay Street, Perth, W.A. 6000.

TROPICAL QUEENSLAND ORCHID COUNCIL TOUR

The Council is arranging an 18-day tour commencing in Brisbane. The probable departure day is 16th January, which allows two days in Singapore en route. Eight days will be spent in Bangkok allowing time for the Conference and many fascinating short trips in the city and countryside. Then follows two days in Hong Kong before flying overnight to Brisbane.

Half-day tours in Singapore and Hong Kong are included in cost.

Present cost per person: \$1,142.

The tour has been arranged by Kings Holidays, G.P.O. Box 795, Brisbane Queensland 4001. Phone (STD 07) 221-3372. Details may also be obtained from Mr. Ron Merritt of 31 Kitchener Road, Pimlico, Townsville 4812.

NORTH SHORE ORCHID SOCIETY (N.S.W.)

This large and active society is organising its own tour and already has the minimum number required for concession rates. It is scheduled to last for three weeks, with prolonged stays at Singapore, Penang, Bangkok for six days, with headquarters at the Dusit Thani Hotel, the Conference centre, then Hong Kong by fabulous Swissair, and on to Denpasar in Bali.

The tour is being arranged to include special orchid excursions at each stopover, together with some special entertainments. These have not all been finalised at this stage because of the many options available and the detailed correspondence necessary to ensure an orchid tour and not merely a tourist jaunt.

Cost as of now is \$1,414 twin, single extra.

An alternative to the above sequence is being organised whereby participants may leave two days earlier and incorporate a sea trip on the luxurious cruise ship "Prinsendam" into their trip. They would fly to Singapore, then cruise to Jakarta, Surabaya and Bali, and fly back to Bangkok.

For final and fuller details contact Mr. Roger Wilson, President of North Shore at 15 Balfour Street, Greenwich 2065. Phone 43-4020.

Travel arrangements are in the hands of Mr. I. Brenner of Atlantic & Pacific International Travel Agency, 62 Pitt Street, Sydney. Phone 241-3921.

GENERAL DATA

Having decided the tour which most appeals to you, send for the detailed itinerary and travel brochures from the travel agency concerned.

In all cases above economy fares and first class hotels are involved, however, only breakfasts are included in the costing, except in cases where a full day local tour is included. The latter usually includes lunch. Not paying in advance for meals gives you the opportunity to dine away from your hotel should you wish.

There will be plenty of short tours in Bangkok and en route. Make sure which ones, if any, are included in the tour price. Also whether any evening entertainments are included. You pay for these irrespective and they are included for their special interest.

Ask the travel agent what extra charges could be involved, such as room taxes, airport departure taxes and gratuities. The agent will help with passport arrangements and advise of health and vaccination requirements.

Conference registration fee per person is US\$50 if paid by 30/6/77, \$55 by 31/12/77 and \$60 thereafter. The Banquet is \$20 per person, and the published proceedings may be ordered for US\$20.

A very attractive booklet on the Conference has been published by the Organising Committee chaired by Professor Rapee Sagarik. It contains essential information on Thailand, tour and registration details, and the Conference program. It may be obtained by writing to: The Secretary, Ninth World Orchid Conference, P.O. Box 9-22, Kasetsart University, Bangkok, Thailand.

The programme and arrangements indicate that the Conference will be different to any

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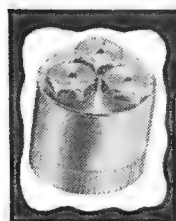
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Asc. Polly Adams x Rothchildiana. 2" pot \$1.25
Asc. Polly Adams x V. Lenavat. 2" pot \$1.25
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previous one, yet retain and maintain the traditions established over the last 29 years. The Show will be truly international, the social side friendly and exotic, lectures on culture and research will be backed by demonstrations of current orchid research — all this and more combined in a blending of the world's great cultures.

Our Thai friends are promising us the world! It looks as though they will deliver.

CASINO AND DISTRICT ORCHID SOCIETY'S BIG YEAR

R. MILLER

Mr. Bob Saunders has been our President for the past year, assisted by Mrs. Elaine Davis as Secretary and Mrs. Robyn Nesbitt as Treasurer.

The champion orchid at our last Autumn Show was *Dendrobium* Lady Fay, exhibited by Bob Saunders who also won the champion prize awarded for culture.

At the Spring Show, Doug Campbell's *C. Dr. Lloyd Hawkinson 'Piedmont'*, was champion orchid of the Show, with Bob Saunders once again winning the champion for culture.



Mr. Bob Saunders, President of the Casino O.S. making presentation to Mr. Frank Slattery at the Spring Show of the Society, in appreciation of him coming from Sydney to judge the Show.

We were honoured to have Mr. Frank Slattery of Sydney to judge at our Spring Show. Mr. Slattery was most impressed with the overall presentation of the show and congratulated members on the standard of all orchids exhibited.

Another highlight of our year was a visit by Mr. and Mrs. Jim Rentoul of Victoria. Mr. Rentoul addressed our monthly meeting and showed a selection of excellent slides to illustrate his subject of hybridisation.

The Society membership has risen to 82, meeting attendance is good and a varied educational programme is arranged for each monthly meeting. Visitors are always welcome. The Society meets in the old Bowling Club House in Convent Parade on the fourth Friday of each month at 8 p.m.

None can love freedom heartedly, but good men; the rest love not freedom, but licence.
— Milton.

BOOK REVIEW

"A Book for Orchid Lovers"

This book is the result of a co-operative effort organised by the Orchid Club of South Australia Inc.

It is a highly professional effort. Most of the writers are amateur growers but there is nothing amateurish about the writing. Each aspect of orchid growing is covered by a specialist in that field, and virtually the entire horticultural range is touched upon.

The book is slanted for the beginner but contains much of value to the experienced grower. It has value as a reference work too.

The opening chapter by Mr. Syd Monkhouse answers the question: "What is an orchid?" by explaining the botany and nomenclature of an orchid, and ends by stressing the value of joining a society.

Shadehouses and glasshouses each have a chapter, then follows a chapter on each horticultural genus or alliance. There is one brief, but good, page on decorative work, an aspect which Australian societies have been slow to regard as important.

A chapter on "orchid pests and diseases" is of great value to any grower.

But the great virtue of the work is its many illustrations. There are 29 in colour, many in black and white, and a number of valuable explanatory line drawings by Mr. Syd Monkhouse and Mr. Morrie Ward. The colour plates are aesthetically pleasing but obviously demonstrative, and tie in aptly with the text.

The print standard is excellent and Commercial Printing House of Adelaide is to be commended. However, there is one aspect of typography which makes for some strain in prolonged reading and that is the overwide column width of the text. In this size type the pages would be easier to read if in two columns.

A welcome feature is the low price, a recommended \$2.50. However, societies may buy at quantity discount rates for lots of 50 or more. It is an ideal book for sale to enquirers at an orchid show. For data contact Mr. D. J. Harris, Honorary Secretary, Orchid Club of South Australia, 38 Princes Road, Torrens Park, S.A. 5062.

HIGHLAND MIST TRIUMPHS

Clones of the *Cymbidium* Highland Mist cross proved their excellence at several of last year's spring shows. *C. Highland Mist 'Barrita'*, owned by Mr. Geoff Barrie, was one that scooped all the main cymbidium prizes at the Newcastle Orchid Society Spring Show, including Grand Champion.

BOOKS WANTED

If you have botanical books or other printed material, they may be useful in my research. I require all books on orchids and any books on Australian flora.

Please submit any offer to:

L. J. LAWLER

Department of Biochemistry

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This comprehensive, fully illustrated booklet is the only complete source of information on growing Cymbidiums, the most popular of orchids.

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Award number, name of plant, award gained, and name of owner are given in that order.

- 834 Cat. Summer Stars 'Melita', CC, Mr. and Mrs. Gulbis.
- 835 Cat. Summer Stars 'Melita', CC, Mr. and Mrs. Gulbis (Second plant).
- 836 Phal. Schone von Celle 'Iceberg', HCC, G. Giles.
- 837 Den. Model x D. Anne Marie 'Yvonne Olive', HCC, R. Morris
- 838 Rhyn. gigantea 'Royal Glow', AD, Mrs. B. Ball.
- 839 Cat. Tiffin Bells 'Orchidglade', HCC, C. E. Chapman.
- 840 Lycaste Koolena 'May', HCC, F. Alcorn.
- 841 Cat. Bob Betts 'White Wings', AM, W. Hughes.
- 842 Paph. hirsutissimum, CC, K. Lansdown.
- 843 Milt. Purple Queen, CC, D. R. Symons.
- 844 Lc. Hertha 'Belfields', HCC, R. Dean.
- 845 Lc. Dorset Gold 'Orchidhurst', AD, R. Trennery.
- 846 Soph. coccinea 'Roseum', CC, Mr. and Mrs. Colthup.
- 847 Paph. Fidelity 'Noel', HCC, W. Hughes.
- 848 Paph. Hoopla 'Wayside', HCC, Mr. and Mrs. Cannons.
- 849 Onc. ornithorhynchum 'Jean', CC, R. Dexter.
- 850 Den. Susie Wong 'Wayside', HCC, Mr. and Mrs. Cannons.
- 851 Phal. Pin Up Girl x P. Showgirl 'Susan Hughes', AD, W. Hughes.
- 852 Rhyn. gigantea 'Greendale', AD, L. Peaty.
- 853 Cym. Etta Barlow x C. Lunagard 'Mrs. R. D. Hughes', AM, W. Hughes
- 854 Cym. Showgirl x C. Fred Stewart 'Glamour Anne', HCC, D. C. Warner.
- 855 Cym. Stanley Fouraker 'The King', EA, Mr. and Mrs. J. Gulbis.
- 856 Milt. Hamburg 'Connells Point', HCC, Mr. and Mrs. B. Cardwell
- 857 Lyc. Koolena 'May', CC, F. Alcorn.
- 858 Cym. Narella 'Jennifer Gail', AM, G. Barrie.
- 859 Paph. Woodruff 'Beecroft', HCC, S. Condon.
- 860 Cym. Etta Barlow x C. Sussex Dawn 'Susan Hughes', HCC, W. Hughes.
- 861 Cym. Highland Mist 'Lalchere', AM, N. Wyborn.
- 862 Cat. Bob Betts 'Sestina', HCC, G. Giles.
- 863 Paph. A-de-Lairesse 'Beverley', CC, S. Condon.
- 864 Ascda. Meda Arnold 'Daphne', HCC, J. Lambert.
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- 867 Vanda Rothschildiana 'Elizabeth', HCC, D. R. Wallace.
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- 869 Blc. Malworth 'Orchidglade', HCC, Archbold Orchids.
- 870 and 871: Medals for displays.
- 872 Cym. Valley Song 'Maureen', HCC, Valley Orchids.
- 873 Cym. Sarah Jean 'Barrita', CC, G. Barrie.
- 874 Den. Hickham Deb 'Susan Hughes', AD, W. Hughes.
- 875 Lc. Lorna Harvey 'Ruby McDonald', HCC, Mrs. Medcalf.
- 876 Paph. Novenka 'Elaine', HCC, J. Marks.
- 877 Paph. Lyric 'Delection', HCC, J. Marks.
- 878 Cym. Fairy Wand x C. Paracel 'Sweet Lorraine', HCC, D. Warner.
- 879 Paph. Elizabeth Keeley x P. Rona 'Cecil Park', CC, Mrs. M. Gulbis.
- 880 Den. teretifolium var. fairfaxii, CC, D. Symons.
- 881 Cataseum roseum (not a valid name — Ed.), CC, G. Barrie
- 882 Cym. Mineken 'Pink Pearl', CC, N. Goudie.
- 883 Cym. Poetic 'Andre', AM, A. R. Byrant.
- 884 Cym. Sleeping Beauty 'Classic', AD, A. R. Byrant.
- 885 Cym. Sleeping Beauty 'Eureka', AD, A. R. Byrant.
- 886 Paph. Lyric 'Stanza', HCC, S. Condon.
- 887 Cym. Lagoon 'Meta', HCC, W. Davison.
- 888 Cym. Pharoah 'Highlight', HCC, A. R. Byrant.
- 889 Cym. Bexley 'Radiance', AD, F. Slattery.

- 890 Den. Bardo Rose 'Berowra', HCC, R. Kerr.
- 891 Cym. Sensation 'Chianti', AD, W. Godfrey.
- 892 Den. delicatum, CC, R. Kerr.
- 893 Den. delicatum, CC, A. Webb.
- 894 Milt. Pam Pam 'Elizabeth', CC, D. R. Wallace.
- 895 Paph. sukakulii 'North Shore', AD, M. Stakic.
- 896 Cym. Malana 'Carmen', EA, J. Dilling.
- 897 Paph. Chivalry 'Sunny Girl', HCC, R. Lin.
- 898 Cym. Pearl Balkis 'Valley High', AM, Valley Orchids.
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- 900 Phal. Karen Ann McFarlane 'Karen', HCC, K. McFarlane.
- 901 Den. Summit Gold 'Gold', HCC, K. McFarlane.
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- 908 Ascda. Dong Tarn 'Pam', AM, P. and M. Spence.
- 909 Ascda. Koh Man 'Red Satin', AD, R. Miller.
- 910 Blc. Mem. Helen Brown 'Showpiece', AD, H. E. Sheaves.
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- 912 Onc. Nona x O. Harry Jensen 'Susan Hughes', AD, W. Hughes.
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A remarkable feature of three N.S.W. Spring Shows was the emergence of native orchids as Show Champions. Yes, not just Native Champions but Show Champions. Mr. Eric Webeck did it at the Berowra Spring Show with a superbly flowered *Dendrobium kingianum*. Incidentally, Berowra started the trend last year with a *D. Bardo Rose*, which was later awarded the first HCC ever given to a native. A *D. Bardo Rose* was the Champion at Western Suburbs O.S. Spring Show. It was beautifully grown and flowered by Mr. and Mrs. J. Baldick. A *D. kingianum* was Champion of the Campbelltown O.S. Spring Show.

To be seventy years young is sometimes far more cheerful and hopeful than to be forty years old. — Oliver Wendell Holmes.

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MAIL BAG

DIFFERING CLONAL COLOURS

The Editor,

Received my December copy of the A.O.R. today and was very interested to read about Ted Boon's oncidium coming out a different colour. Townsville is about 200 km from here and I attended many Society meetings there, also meetings of T.Q.O.S.

About twenty years ago, I had a large plant of *Cattleya Orient*, a white with just a slight trace of pink. I cut it up into six plants which I put into the same sized pots, exactly the same potting mix and placed them on a shelf, side by side. During the growing period I traded a few and some people wanted to know if I was colour blind as some were white and some pink. It turned out that three were pink and three were white. These plants, and all cuttings from them, have kept their pink or white until now.

Many years ago while up on the tableland around Mareeba looking for *Cymbidium canaliculatum* var. *sparkesii*, I came across an interesting angle on these plants.

On trees with large plants there were several small plants growing in holes where small branches had broken off. These had one to four bulbs and the first bulb was full size, which to me meant that it did not come from a seed. We cut the tree down and found it was hollow, no wood, but packed with roots for a distance of twenty feet or more from the top. As a root approached the knot hole, two leaves formed and these came through the hole to form that bulb. I have some here now where we have split the outside wood off and the roots are forming plants.

Yours sincerely

D. Penman

18 Monica Street, Innisfail, Queensland 4860

THE MYSTERY OF IT ALL

The Editor,

Further to the question of colour change in pieces of the same clone (December A.O.R., page 203), I raised at a recent T.O.S. meeting: The plant concerned is a mini oncidium, *O. Waikiki Sunset* x *O. Pink Lady* which I purchased from a local nursery as a large plant on a treefern slab, I decided to reslab the plant and broke off the largest section of two growths.

The remaining large portions of smaller growths was potted in large quincan and charcoal. After a month or so it became obvious this portion did not appreciate the conditions and it was then slabbed with the grain of the tree fern running horizontally.

In the meantime the first portion had dug its roots in and produced the largest growths I've yet seen on a mini oncid., a good five feet six inches high.

The second piece, after a few weeks had also begun to go "mad", but with smaller growths.

Both put up two spikes each at the same time, the first piece with exceptionally long spikes, while the second piece had shorter stems and flowered first, this had very bright rosy-lolly pink flowers with red spotting.

The first piece flowering with very washed-out

pink flowers with some red spotting. As they aged (lasted about two weeks), they brightened slightly but did not reach the same delightful colour of the other plant. Hence my question: How can a plant taken from another produce different coloured flowers and growing on the same material?

I know it can happen that two plants can grow together but there were no breaks apart from the break I made when removing the larger portion.

Since the flowering, the larger growing plant has produced two growths while the second piece has produced no less than five, so it will be interesting to see the results of this year's flowering.

All my mini oncid. are fed alternatively with Folidol or Liquifert and watered once or twice a week, hence they get a good drying out.

Not all my minis are slabbed, I have a number in small clay pots in quincan and charcoal, with the odd one in shredded tree fern. These are placed in 100 mm plastic pots and hung. I find no real problems with them except for the fact I've exhausted the supply of mini oncidiums around Townsville and find them rather hard to obtain.

If any nursery or grower specializes in this genera, I'd be delighted to hear from them.

Hoping this will add light to the question.

Ted Boon

1413 Ross River Road, Kelso, Qld. 4815.

A TRAGIC LOSS

To the great sorrow of his family and many friends, Mr. Maurice Watson of Townsville died suddenly last November.

Maurie, as he was affectionately known, was an orchid grower from way back and an indefatigable worker for the good of his fellow growers. He was very active in the work of the Tropical Queensland Orchid Council and was its Registrar at the time of his death.

He will be long remembered by those he has helped.

TOWNSVILLE AUTUMN SHOW

Townsville District Orchid & Allied Plants Association is to hold this year's Autumn Show from Thursday, 19th May to Saturday, 21st May, at the Townsville Art Centre. Southerners note: May is a wonderful month, weather-wise, to be in Townsville.

GOING TO NEW ZEALAND?

The New Zealand Orchid Society holds its Winter Show on July 7th, 8th and 9th, and the Spring Show on September 22nd, 23rd and 24th. Both Shows will be held in the Mt. Albert War Memorial Hall, New North Road, Mt. Albert, Auckland. For advance data contact the Honorary Secretary, Mr. C. H. Brindle, 24 McIntyre Road, Mangere Bridge, Auckland, N.Z.

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After three years very successful leadership, Mr. George Hillman has stepped down as President of the Newcastle Group of A.N.O.S. The Group put a tremendous amount of work into establishing a native orchid bushhouse in the Blackbutt Reserve — a wonderful stand of natural forest almost in the centre of Newcastle's suburbs. Mr. Bill Moloney of Warners Bay is the new President.

Error of opinion may be tolerated when reason is left free to combat it. — Jefferson.

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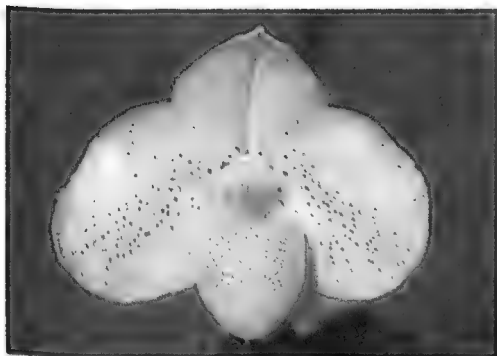
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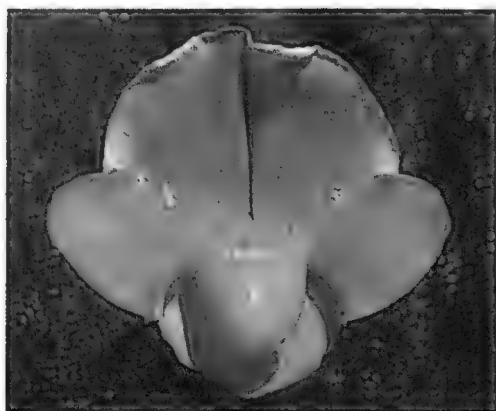
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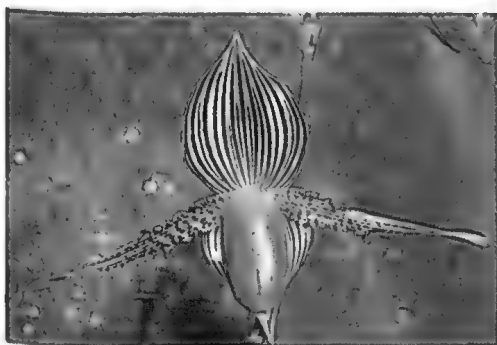
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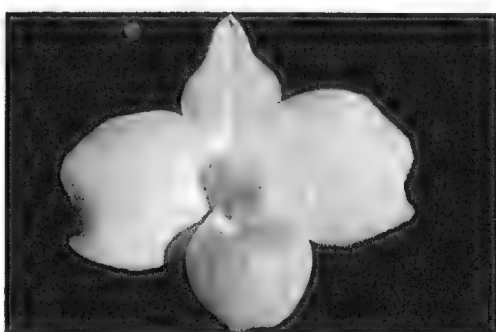
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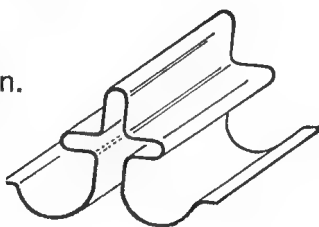
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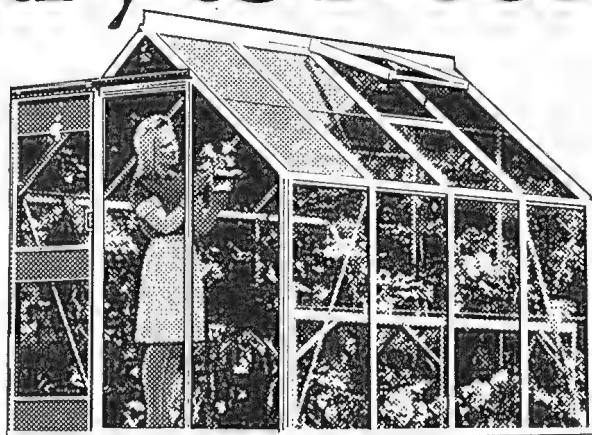
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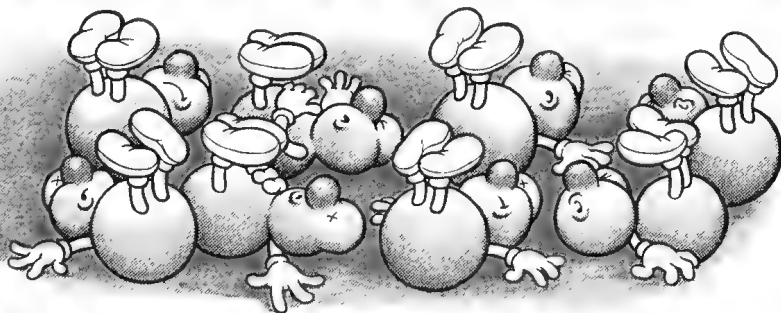
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Australian Orchid Review

JUNE, 1977

VOLUME 42

No. 2

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Orchid Names: A species of orchid has both terms in italics and only the first term has a capital. With hybrids the generic name (first term) is in italics but the second term is in roman with a capital letter. The name of a genus used in a non-botanical sense is in roman type and has no capital.

COVER STORY

Soft cane dendrobium breeding is big news because of the major developments made by Mr. Jiro Yamamoto in Japan. Mr. Yamamoto, using newly-found tetraploids as parents and breeding on a massive scale has achieved outstanding results. Although on a more modest scale some interesting hybridising is being done in Australia. Mr. Harry Spence is our most knowledgeable grower of this colourful group and his article in this issue summarises the breeding history as well as current developments. It is an excellent guide to what breeding lines to look for in buying seedlings. Soft canes fill the gap between the Spring flush and Summer flowerings and thus are an asset in any collection. The cover photo is of a clone bred in Sydney from the parents D. Winifred Fortescue x D. Adele. It is expected the cross will be registered as D. Adele Fortescue and the plant illustrated has been given the clonal name 'Rosamund'.

W.A. President's Welcome to 5th A.O.C.

On behalf of the members of the Orchid Society of W.A. (Inc.) I extend a very warm welcome to all intended registrants to the 5th Australian Orchid Conference in Perth next September.

When I attended the 4th Australian Orchid Conference in Sydney in 1975, I told intending visitors to Perth, that the orchid growers here, would put on a typical West Australian welcome for them when they came over in '77, and the committee have planned for such a programme.

One of the affiliated societies of the Orchid Society of Western Australia is the Native Orchid Study and Conservation Group; this is a very active society and its members are very keen to meet visitors from Eastern States Societies, with the idea of striking up friendships, and showing them our rather unique native orchids, and where they can be found growing locally in their native habitat.

A pre-conference tour to Geraldton has been planned as well as a post-conference tour to Albany. These tours of course are also aimed at showing registrants some of the wildflowers and native orchids that grow in profusion in these districts.

The theme chosen for the Conference is "Orchids in a State of Excitement", but I feel it's the societies members who are in a state of excitement over the coming event. It's four years now since it was first suggested the conference be held in Western Australia, and the committee has been working towards this goal since that time. Like all planning for any conference, the tempo has quickened these past 12 months, and although to date everything is running to schedule, it will be the final organizing that will put the polish to the success of the week's activities.

A full week's programme has been arranged, with a wide variety of sightseeing tours, evening entertainment, an interesting series of lectures, cocktail party, banquet, culminating with a wind-up buffet dance, which we think will cap off the week's events.

The entire conference will be held at the Sheraton Hotel, including the orchid show.

A feature of the show will be the display by the Native Orchid Society, which will exhibit some of the State's terrestrial orchids,

collected from all parts of the south west. See you in Perth in September.

R. D. Brown, President, O.S. of W.A.
28 Windfield Rd., Melville Heights 6156

There is still time . . .

The Fifth Australian Orchid Conference is just weeks away as we go to press. It is going to be an experience all those participating will remember for the rest of their lives. If you have been wavering but would like to and can organise the time then act now. You won't be sorry.

Your Society probably has copies of the Conference Programme leaflets and registration form. If you haven't one, send to: The Secretary, Convention Co-Ordinators, P.O. Box 7009, Cloisters Square, Perth, W.A. 6000.

If paid before 30th June, the registration fee is \$25.00 single and \$40.00 double. After that date \$30.00 single and \$50.00 double.

The leaflet gives the full programme, summary of the papers, and a list of tours available.

Your State Society has organised tours with some options, at special money-saving rates. Contact them.

CORRECTION

On page 39 of the March issue the special tour to Singapore was given as leaving Perth on the 11th September. This should have read 18th September. The Conference, of course, is from the 12th to the 17th, although pre and post activities and tours extend this period to suit your convenience.

FIFTH CONFERENCE PAPERS

Papers at this Australian Conference are up to the standard you would expect at a World Orchid Conference. Prof. E. A. Schelpe is to talk on *Orchids in South Africa* and Prof. Rapee Sagarik of Bangkok on *Development of Orchid Growing in Thailand*.

Mr. Paul Phillips of Ratcliffe's discusses *Paphiopedilums, the future and beyond*. Dr. Carl Withner, famous for scientific research on orchids provides a paper on *Photosynthesis Patterns in Orchids*. Other papers deal with culture of dendrobiums, odontoglossums, and vandaceous orchids. Of special interest will be Mr. Merv Dunn's paper on a topic in the very forefront of breeding: *Induced Tetraploidy Cymbidiums*.

Meet some West Australian Orchid personalities

Success with many genera

BILL JANNEY

My involvement in orchids commenced in 1965 when my wife brought home a cymbidium which she had obtained from the Stall at the Orchid Society's Spring Show. This plant flowered the next year, and since then orchids have become a way of life with us.

I was elected to the Committee in 1967 for a period of two years but had to relinquish that position at the end of that period due to ill health. I still maintained my interest in the cultural side and was selected as an Associate Judge in 1967 and advanced to the position of Judge in 1970. In this capacity I went to the Adelaide and Sydney Conferences. Miscellaneous orchids with their various shapes and growing conditions were always a fascination to me and I gave the Monthly Cultural notes for these genera for a period of seven years.

On the exhibition side, I have had average success at annual shows, and in 1970 had the Champion Cymbidium with a seedling — C. Bundah 'Capua'. I have been successful with Australian Natives and Hybrids, and received three awards — two awards for different clones of *Dendrobium delicatum*, and one for *Dendrobium Suffusum*. Having a varied collection of about 30 genera, gave me the success from which I derived the most satisfaction — the yearly aggregate from monthly meetings which I won annually for a period of ten years.

A shade house 40' x 20' contains my collection of 200 cymbidiums and 100 Australian Natives and hybrids. I do also have a specialty collection of about 1,600 plants of *Pterostylis baptistii* which have been grown on from 8 bulbs received after the 1969 Sydney World Conference. Two cold glass houses and one heated glass house hold the collection of 100 cattleyas, 60 paphiopedilums and 75 miscellaneous orchids.

In 1975 at the inaugural Show of the Melville Orchid Society, I was successful with C. Joyce Duncan 'Kersbrook', and in 1976 at the inaugural Show of the Wanneroo Orchid Society I was successful with C. Wallara 'Golden Glow'.

Many other plants have provided highlights for me, among them being C. Anita 'Robert Mead', C. Featherhill 'Heritage', C. Burgun-

dian 'Sydney', C. Balkis 'Captain Anderson', C. San Francisco 'Meadow Mist' (best W.A. exhibit at the Adelaide Conference), C. Lady Bug 'Capua', *Lc. Butterfly Wings* 'Capua', *AD/OSWA, Blc. Emerald Meadows* 'Capua', *Angraceum Veitchii*, and *Paph. Everest*.

16 Bartlett St., Willagee 6156

An outstanding collection

'Carradale', the home of Mr. and Mrs. G. E. Marshall, is situated in Forrestfield at the foot of the Darling Ranges and about 12 miles from the City. There are 10 acres in the property much of which has been developed as open parkland with native and exotic trees and shrubs. George Marshall, who is the Society's Registrar, grows mainly cattleya and paphiopedilum, while Jean has a large collection of phalaenopsis. There are three main glasshouses each 4.5 m x 7 m, with several smaller ones, and a large area of shadehouse. One shadehouse contains some 500 paphiopedilums, which grow there all year round, being only brought under glass when in flower. Over 1,000 cattleyas are partly grown under shadecloth, with the smaller and less robust types kept under glass.

A separate house with electric heating is devoted entirely to phalaenopsis.

'Carradale' will be open to visitors on Friday, September 16, during the 5th A.O. Conference.

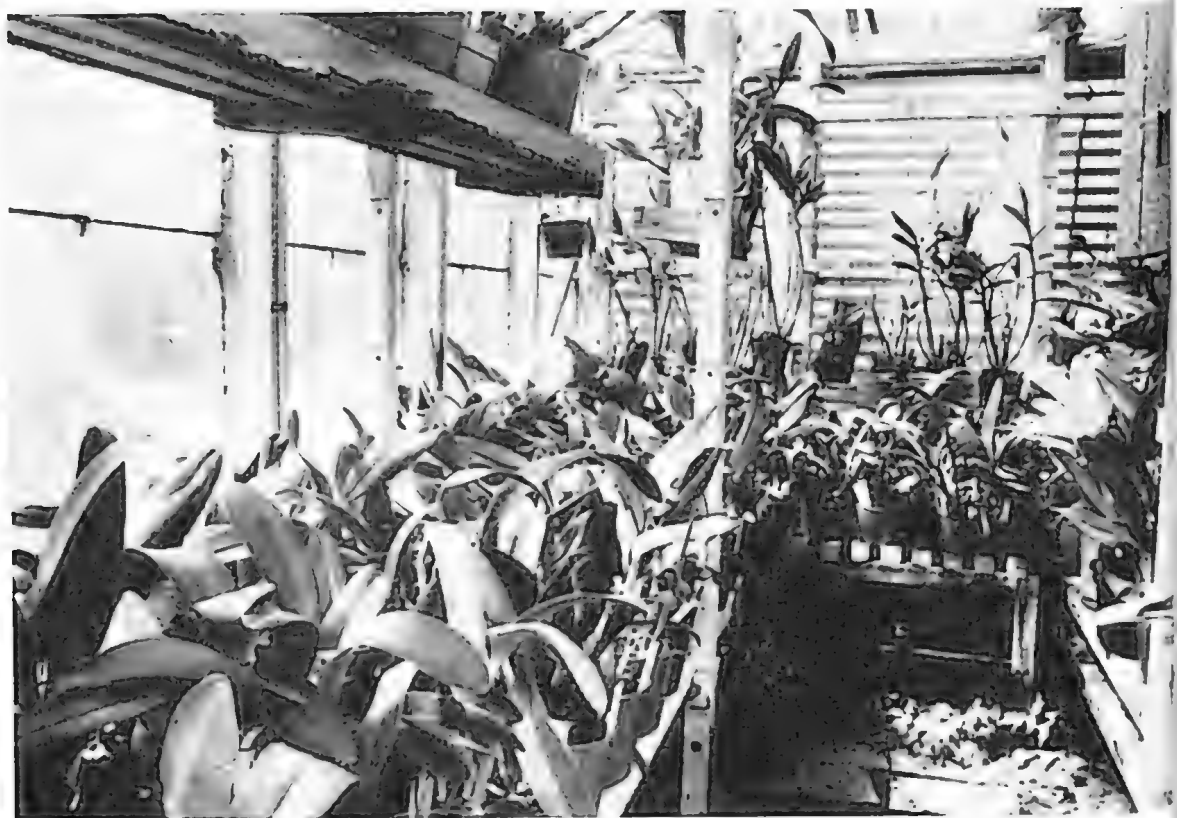
How I came to grow orchids

ALEX. JOHNSON

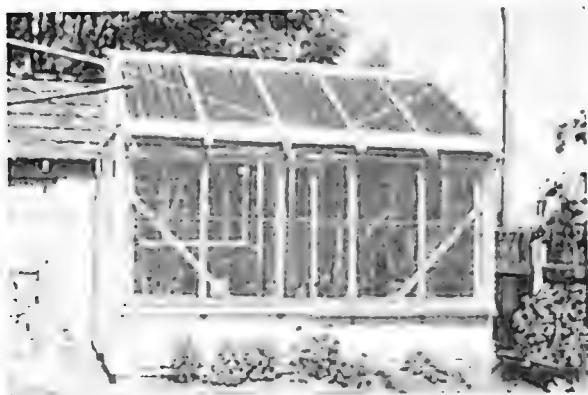
Until about September 1962, my conception of orchids was vague. I dismissed any thought of growing them as being too difficult and not really worth the bother.

At that time one of my daughters was about to be married and a relative in N.S.W. sent over a box of cymbidium spikes for the wedding. This coincided with an orchid show by the W.A. Orchid Society at the Perth Town Hall. My wife suggested that I see the show. I did. I thought the cymbidiums were beautiful but I fell in love with the cattleyas and determined that if others could grow them, I could also.

I put in an application for membership of the Society and went around asking questions. The answers I remember were:



Interior and exterior views of Mr. Alex Johnson's glasshouse.



1 — A glass house is best for cattleyas; 2 — The minimum practical size would be about 8 by 12 feet; 3 — To cope with our summer heat, the house should be fairly high. In due course, an 8 ft. by 12 ft. house with side walls 7 ft. high was built. I expected this to hold about 100 plants which would be more than I wanted (so I thought). Later, a circulating-exhaust fan, thermostat controlled heaters and below bench humidistat controlled misting sprays were installed.

The advice must have been good, as it turned out that cattleyas grew very well in

it. From a dozen or so plants, the collection has now grown to about 300 in the glasshouse and an overflow of about another 100 in a shade house. Yes, they are crowded. I think the main feature to see is the growing of cattleyas in such crowded conditions. Results are still good.

Hybridising success

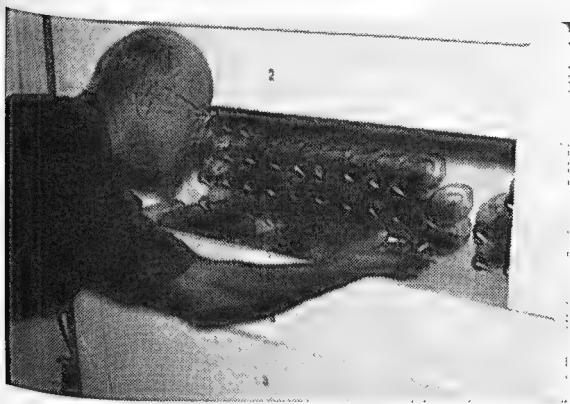
H. J. LODGE

As all orchid growers know, the art of orchid culture embraces a large field, and after growing orchids for a few years some growers start thinking about hybridising a few plants and growing some of their own seedlings.

This happened to me.

I started growing orchids after the Second World War, at the time when the Orchid Society of W.A. was formed in 1946.

Having always an interest in W.A. terrestrial orchids the introduction to other genera was an entirely new field, and it was not long before I started my thoughts on growing seedlings, especially paphiopedilums, the genus had always fascinated me. So the search



Mr. Lodge attending his flasks.

was on to find out all about this wonderful new world of seedling production.

I was a seeker of knowledge and I found it in many places. Good books were not available, but the few that were yielded a few pieces of the puzzle.

The late Mr. Ron Ratcliffe gave me encouragement, and advice, but I could not produce what I wanted with his media.

A switch to cymbidiums gave me my first success, but I was still only on the threshold, as I had only made my first step.

After a visit to my glasshouse, and a look at my efforts, Dr. Edgar L. Griffiths suggested that we join forces. The association was a great benefit to both of us, and with help and knowledge of a mutual friend Mr. Harry Kretchmar, we developed our media and technique that led us to success.

However, it was 1964 before we germinated our first paph. seed, and many happy hours were spent together producing some wonderful seedlings.

Time came when we went our separate ways, and I continued to pursue my life interest of hybridising paphiopedilums, my first love, and also cymbidiums.

To all budding hybridists I say: Keep working at it, you will have a lot of failures, and a few successes at first, but you will also have great pleasure in the final mastering of a wonderful work.

I hope that you can attend the Conference in Perth in September 1977, it will be a great opportunity to discuss our favourite subject, orchids.

100 Spring Rd., Thornlie 6108

Herb Foote of "Foothills"

Mr. H. 'Herb' E. Foote joined the Orchid Society of Western Australia (Inc.) in 1958

and in the intervening years has held every office except that of Treasurer.

He was Hon. Secretary for the year 1959-60 and has served on Committee ever since.

Appointed as an Associate Judge in 1960 and subsequently a Judge of the State Judging Panel in 1962. Herb was in 1964 elected Deputy Chairman of the Judging Panel. In 1971 he was appointed Deputy Registrar and finally Registrar in 1972. The following year owing to ill-health he was obliged to relinquish his position.

Being a keen and accomplished photographer Herb was appointed Official Society Photographer in 1960, a function which he continues to fulfil.

As President, quietly efficient, Herb served the Society for a term of two years from 1967-70 and has continued as a Vice-President to this date.

In the public relations area he was appointed W.A. Society Liaison Officer to the American Orchid Society in 1968; Publicity Officer for the W.A.O.S. from 1962-69 and in 1969 was the W.A. Society Delegate to the A.O.C. Conference in 1969. He was also Associate Editor for W.A. to the A.O.R. following the retirement of Mr. S. P. 'Percy' Hall.

Honorary Life Membership of the Orchid Society of W.A. was awarded Herb in 1971 for his long and outstanding service.

Herb was instrumental in founding the W.A. Native Orchid Study Group, which held its first meeting in March, 1974, and he was appointed Inaugural President, a position which he still holds.

In recognition of his endeavours in this Society he was awarded Honorary Life Membership in February of this year.

Herb retired in March, 1975, after 50 years as a photo-engraver and now devotes most of his leisure time to orchids generally; however, his main interest is the study and conservation of West Australian native terrestrial orchids.

During his association with orchids Herb has grown and flowered many fine species and hybrids and was successful in receiving A.O.C. Award No. 12 for *Cattleya* Virtue 'Kathryn' HCC/AOC-OSWA being the first A.O.C Award granted to W.A.

May good health give Herb and his wife Nell, many more years in their beautiful orchid studded garden by the creek at "FOOTHILLS".

SOFT CANE DENDROBIUMS

Form and Colour from Colman to Yamamoto

HARRY SPENCE

With a title such as this, one could be forgiven for thinking that the subject has evolved from the judging standards of the Australian Orchid Council. Such, however, would not be quite true. Admittedly, so far as the Standards are concerned, both form and colour are on the same plane when pointing up dendrobiums; both receiving up to 30 points each; but the title has really emerged from another facet of judging.

At the February meeting this year of the Orchid Society of New South Wales, our ace photographer, Mr. A. B. Porter, enthralled us with slides of all the orchids which have received awards by the A.O.C. over the last decade, from the very first, *Cym. Wallara* 'Wondabah', Orchid of the Year 1966, to the latest slides processed of flowers gaining awards to the end of last season — some 130 in all. Many cattleyas of great charm and perfection, headed by the very beautiful *C. Sylvia Fry* 'Wallacia', FCC/OSNSW-AOC, glorious cymbidiums, seemingly impossible to be improved upon, and yet still gaining more and more honours as the seasons creep along the years; a goodly number of paphiopedilums with ever-increasing and newer colours — vandas, phalaenopsis, lycastes, miltonias and so on, genus after genus, but never a soft cane dendrobium. This seems odd for an orchid grown so extensively along the eastern coastal strip of this continent by almost all growers. Every bush-house in this State probably has a few plants hanging in it somewhere, and a few undoubtedly have large numbers. Yet no A.O.C. awards! Why not? Are we such poor growers that we cannot produce a single cane of flowers capable of gaining even an HCC? Can we blame the hybridisers for breeding plants which do not conform to the standards laid down? Perhaps after all, our own culture is at fault! Perhaps even now we do have plants capable of winning awards but lacking the necessary know-how to bring about the desirable result. Let us look back into the past for a few moments to see why the present is so, that we may improve the future in this most beautiful genus.

In this paper I am devoting some short time to the early English hybridists and the

plants which they produced in the early years of this century; some time to the plants we have grown ourselves in Australia and our prospects for better form and new colours, and then a look into the crystal ball to try to assess the results of Japanese breeding both in Japan and Europe, the results of which are now finding their way to America, as well as here to Australia; new and most attractive colour combinations, together with good form, which have gained awards for them in all countries.

On the English scene, in the latter half of the nineteenth century the hybridists then commenced a breeding programme which culminated in such useful and prolific parents as *Ainsworthii*, *Curtisii*, *Cybele*, *The Gem*, *Wiganiae* and many others, names which can today be traced back in the lineage of many of our most notable dendrobies. For instance *The Gem*, is one of the parents of *Lady Colman*, one of the greatest hybrids ever produced and if examined today would probably be found to be a tetraploid!

Sir Jeremiah Colman commenced his breeding of dendrobiums very early in the century and from his Gatton Park Estate there came a most colourful and prolific array of hybrids — many from the species *D. regium* — *Royal Princess*, *Prince Arthur*, *Lady Violet*, *Alpha*, etc., the latter still both Gatton Belle and Gatton Beau — two plants still being used extensively in breeding today, half a century later! All of these *regium* hybrids were notable for absence of the dark eye in the labellum and for their great floriferousness. Many of you know the pink Gatton Belle seen frequently in Sydney, and also one of its most colourful and floriferous progeny *D. Delmonaco* 'Mylene'. Colman laid such a foundation in breeding of these plants that his achievement will never be forgotten throughout dendrobium history. From Lady Colman alone have come such outstanding plants in their lineage as *Milady*, *Gatton Monarch*, *Winifred Fortescue*, *Kongoh*, and into the second generation such shapely and beautiful flowers as *Margaret Illingworth* (*Milady* x *Winifred Fortescue*) where Lady Colman is on both sides of the family. Thus we have a great

deal for which to thank Sir Jeremiah Colman.

Stuart Low followed him, working mainly in yellows and from Ainsworthii x Thwaitesiae produced Montrose, one of the most superb yellows up to that time. He followed that with Ceylon Glory, another glorious yellow and then the best of them all, the famous Fiona, an old gold which today is commencing to introduce pure canary yellows of excellent form. At this time also Horridge was breeding *D. Merlin* (*D. nobile* x *D. Queen of Gatton*) a crossing which was later to be responsible, crossed with *D. Lady Colman*, for the tetraploid *D. Valadeva* in Japan, and so direct the course of breeding in that country. Schroder followed with Milady and Strauss with Winifred Fortescue, and from the so-happy marriage of these two was born *D. Margaret Illingworth*, one of the most beautiful of all present-day dendrobiums, both in form, colour and size. A glorious flower.

Of all the English hybrids produced in the first half of this century two remain like great pillars standing at the portal of dendrobium fame — that on the left being called *Lady Colman* and that on the right Winifred Fortescue, and as in the genus *Cymbidium* *Alexanderi* 'Westonbirt' was responsible for such remarkable advancement in quality, followed when mated with Rosanna 'Pinkie', by its even more illustrious offspring Balkis, so these two dendrobiums have laid the foundation for many of the plants which are now giving such excellent results.

In 1959 Peter Smithers registered the cross *D. Valadeva* (previously mentioned), but within a very few years this same cross, on being remade by Sohma in Japan, produced tetraploid type 4N (*Valadeva* 'Sohma') and this plant became very much the backbone of quality soft canes in that country, as *Lady Colman* had become in England half a century before it.

We now think about Wichmann, who produced *D. Anne Marie* in West Germany. I have included him with the English breeders as many of his *Anne Maries* found their way to England long before they arrived in either America, Australia or Japan. The crossing of Winifred Fortescue and Montrose had a very great impact on the growers of soft cane dendrobiums — a shot in the arm as it were, for from that time onward an increased keenness among all lovers of this genus was noticed. It may be as well to

mention at this point that ever since this cross was registered there has been great controversy among hybridists as to the correctness or otherwise of this registration. It has been suggested many times that Wichmann's Montrose was in fact a Zeno, for whenever the cross has been remade (and this has occurred many times) the result has always been a flower with mauve-purple segments fading to lighter shades towards the centre, whereas the original cross reflected a considerable amount of yellow in its make-up — notably in varieties like 'Eva Bradshaw', 'Stonehurst's Yellow' and other similar clones, and even when mauve-purple predominated, much yellow flushed through the labellum. The one exception seems to be *Anne Marie*, AM/RHS, it being a dark red-burgundy, a glorious deep colour and one which Yamamoto is using extensively in his breeding programme in Japan today. Whether the cross was intentionally registered incorrectly will never be known. In earlier days whether or not the collectors who discovered species in the forests recorded their true locations is a matter of question. Sometimes they gave false information to maintain an exclusive source for more plants. This may have been a similar case with respect to *Anne Marie*. Who knows? Whichever it is, however, *Anne Marie* has stood the test of time and is still a most popular and beautiful flower. A feather in the cap of Winifred Fortescue.

In Australia during these earlier years dendrobiums were very much the poor relations. Admittedly they had received a few N.S.W. awards — number 29, AM to a *Gatton Belle*; number 59, AM to a *Gatton Monarch*; number 86, AM to *Lady Colman* and so on, but they were few and far between and seem to have remained so over the years. The last grower to receive an award was Ron Morris, who gained an HCC for a Model 'Magnificum' x *Anne Marie* in 1973. Before him Mrs. Gulbis received a HCC for a clone of the cross *D. Anne Marie* x *D. Fiona*, and Mr. H. D. Lanceley a HCC for *Anne Marie* 'Janice' about 1968. Before that, some of Bonnyman's *Anne Maries*, varieties 'Port Hacking' and 'Eva Bradshaw' about 1965 or 1966 but generally speaking all the awards for dendrobiums in N.S.W. over the last decade could be counted on the fingers of one hand.

In this period, however, since the arrival of *Anne Marie*, here as in England interest

has increased, and hybridists both commercial and amateur have settled down to some steady breeding programmes, the results of which are now commencing to lift the dendrobium to far greater popularity than it has ever enjoyed here before. Practically all the plants in this country up to the 1960's were propagations imported from England, so that what they had there, we then had over here. Now, however, we are working on our own breeding, seeking larger clearer yellows, better textured whites (and the field in white is very poor even today), more modern colours such as lilac, rose, orange, bluer purples and even green, and these also without the dark *nobile* 'eye' and in many cases we are succeeding.

One of the more popular of the newer crosses commencing to show some potential in the yellow field is Adele Fortescue, being Winifred Fortescue x Adele. Charlesworth crossed Montrose with Fiona the resulting progeny being named Adele, and the variety being used in this cross in Sydney was 'Adelina', a large pure canary yellow. The addition of Fiona to what would otherwise have been Anne Marie has considerably strengthened the yellow. In fact the colours have ranged from pure white (with dark *nobile* 'eye') through cream to yellow to buff to old gold, a few tipped with faint mauve to others heavily marked with purple on all segments and the odd one reverting to the Winifred Fortescue darker shadings with no light tones at all. In most cases form has been excellent and size good — yet another feather in Winifred Fortescue's cap. Therefore, Fiona seems to be one of the parents we are looking to for future pure yellows — form to depend on the other parent in the cross — tetraploid wherever available. All these yellows, however, have one common denominator, the dark eye, and to obliterate this dark blotch we must get away from the *nobile* lines of breeding and use one parent with a clear lip. Felicity is one, being bred from the species *D. wardianum*. The white Gatton Belle is another from the species *D. regium*. In fact, *D. regium* is probably the most powerful in this field for blotting out the dark eye and many of its hybrids — Prince Arthur, Lady Violet, Princess Royal, to name but a few; all have potential for this clear labellum.

Another local and very satisfying cross proving that we are working along the right



D. Adele Fortescue

line is Felicity Fortescue, a mating of Felicity to Winifred Fortescue. Felicity is an old hybrid — almost a primary, being *D. wardianum* x *D. Melanodiscus*, made in the earlier days of this century and with a labellum very similar to that of *D. wardianum* — wide hyacinth-shaped, creamy-buff in colour having no dark eye and seems able to pass on this influence to its progeny in much the same form. When crossed with Winifred Fortescue, resulting colours have ranged from almost pure white 'Elizabeth' to mid pink 'Pink Lady', to fine form and darker red-purple 'Jean', to a combination of pink and white in 'Parfait', delightful soft toning in 'Powder Puff' and 'Fairy Floss' and all these without any dark markings in the lip. In fact, a very beautiful labellum — yellow eye banded with white and tipped with rose or purple, somewhat similar to a 'Tain' lip. Only about one in twenty seems so far to have produced the dark *nobile* 'eye', so Felicity has definitely influenced the labellum while once again Winifred Fortescue has controlled the form. There are quite a number of this cross yet to flower. It has been the most prolific one, of good growing habit, large strong canes and most floriferous.

A somewhat similar cross to the above so far as obliteration of the dark *nobile* 'eye' is concerned commenced to be seen around Sydney last season — *D. Leeds* (*D. nobile* x *D. Regina*) x *D. Anne Marie*, and we await further flowerings with a great deal of interest. Form was generally not as good as its parent Anne Marie, but these crosses prove that we have broken through the colour barrier and are well on the way to newer and more modern trends. Form may need another generation to accomplish the standard which we want, but colour we now have.

Fort Plum proves this — a cross registered by Mansell & Hatcher in 1970 (Winifred

Fortescue x Plumptonense) and at the same time crossed locally in Sydney, early flowers are producing a bright deep burgundy-red and good form, with beautiful labellums — dark 'eye' of course. Thus we have no lack of breeders creating new and exclusive varieties and the coming years will prove that our plants can hold their own with others from any part of the world.

On the Japanese scene colour seems to have taken precedence over form (that is, form as required by our standards) blending most attractively into colour combinations which we will find here to be most entrancing. Our more perfect form complimented by their more perfect and appealing colour!

In Japan dendrobium cultivation began about the year 1800, mainly with the Japanese species *D. moniliforme*, of which there were about 100 different varieties. However, at the time, the flowers did not appeal very much because they were small, but on the other hand they had a sweet fragrance and so were gradually used for house decoration. Improvement really commenced about the time that Viscount Sohma, who was attached to the Japanese Embassy in Britain, returned home after a term of duty in that country, and being a keen dendrobium grower, took back with him a large number of top quality English hybrids, many of which originated with Colman and other breeders whom I have mentioned earlier in this paper; plants which later became the nucleus of the vast breeding programme embarked upon by Jiro Yamamoto.

When one first comes face to face with Japanese dendrobiums the principal attribute which immediately strikes one is the great beauty of the names which have been chosen and registered for these plants. Over the years the practice throughout the English-speaking countries seems to have been to name plants either after their breeders — Ainsworthii after Ainsworth, Thwaitesiae after Thwaites and so on; after names of places such as Colman's naming of many crosses after his Gatton Park Estate — Gatton Monarch, Queen of Gatton, Gatton Sunray, Gatton Belle, etc., or after the names of various people such as Margaret Illingworth, Betty Keeling, Winifred Fortescue, Terence Read and many more, but when we come to the Japanese names we find such beauty as *D. Glorious Rainbow* and immediately visualise a vast spectrum of colour — not that such



D. Mt. Fugi

is the case, for although a very beautiful flower, all the colours of the rainbow do not combine to make it a great kaleidoscope of polychromatic brilliance. Angel Flower is another truly celestial name. This is indeed a flower of great charm ranging in colour from the faintest pink flush to deep red-lavender and mauve-purple, most with a large creamy yellow 'eye'. Probably, variety 'Okayama' is the best of this hybrid being a very large round and beautiful flower and awarded an AM by the R.H.S. Other names include such unusual beauties as Aurora Heart. When quite young at school one learned of the exceedingly colourful lights of the Arctic sky — the Aurora Borealis, and here we have the very heart of it, colour unlimited! Others are White Pearl, Charm Star, Christmas Chime, Melody of Spring, Red Fairy, Oriental Paradise and many hundreds more — far too great a number to list here. A great many, of course, are registered as Japanese names and their English meanings are not so obvious. Akatuki, for instance, a very beautiful bluish-purple flower with a large yellow lip means "that instant just before the sun rises" — and looking at the flower one can certainly imagine the early bluish haze which precedes the sun's rising over the horizon. Yukidaruma, a glorious white awarded AM/JOS last year, means "The Snowman". Yuki-musume, another white, becomes "The Snow-girl". Myojo means "The star which can be seen very early in the eastern sky — Venus, that bright morning star whose rising brings peace and salvation to the faithful and obedient among men". Names such as Marimos, Zakimos, Sagimony and others similar are named after parts of both parent names put together and so these have no meaning at all in English.

So far as the Japanese breeders themselves

are concerned, undoubtedly Jiro Yamamoto has done more in experimenting and hybridising with soft cane dendrobiums than all the others put together; but let me say at this point that he has done no more than you or I could have done, except with regard to quantity. We look upon one or two flasks of seedlings as being more than we can handle and finish keeping only the best of them and destroying or giving away the remainder. Yamamoto talks in hundreds of thousands (14,000 plants of Glorious Rainbow, 6,000 of Angel Flower (600,000 seedlings in a season), vast figures far beyond our comprehension so far as dendrobiums are concerned. There would not be 600,000 dendrobium hybrids in this entire country let alone in seedlings, but then he has the market for this huge quantity. Millions of units, flats, rooms, etc., with no ground space for horticulture and all requiring potted plants of some sort for house decoration, and with Yamamoto, dendrobiums can just as easily be grown as carnations. Not so, however, when he started during the 1950's. His great collection has arisen from the plants brought in from England, the species and primary hybrids imported by Sohma, and from continued selection and breeding, preferably from tetraploids (4N) quality of flowers has increased to the position of eminence it holds today. He maintains that tetraploids have more good points than bad, their bad points being of lesser importance. As for good points, tetraploid types in comparison with other types are healthy and fast growers, more resistant to insects and disease and mostly larger in size. Against them is the fact that the majority are inclined to be late bloomers and often poor in floriferousness. This latter point is probably the cause of his making many crosses using plants like Thwaitesiae, Montrose and Gatton Belle which we know here to carry great numbers of flowers very easily and since his market requires house plants with plenty of flowers and colours, these are the types he is using in this field. When mated to known tetraploids such as Valadeva or Permos exceedingly beautiful results are appearing.

I am inclined to think that Yamamoto's greatest successes have been mainly in two colours. Firstly, in whites. Throughout Europe and Australia whites have always been a poor lot. We have had nothing worth noting in quality — *D. nobile* 'Virginale', *D. Cybele* 'Alba' and their hybrids, Fortyniner and later

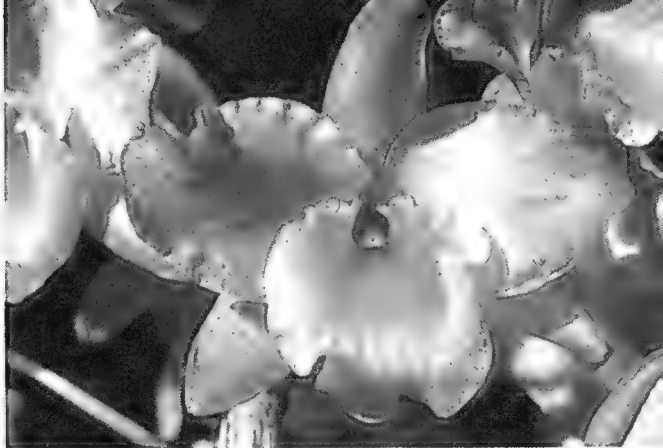
Winifred Fortescue 'Ladybird', the latter being certainly the best; but Yamamoto has produced dozens of good whites mainly bred originally from Gatton Belle and Gatton Beau and other *D. regium* hybrids such as Mont Blanc, some pure colour and others with the dark 'eye'. Japanese seem to prefer the contrasting white with the dark 'eye' to the pure white. Secondly, he has perfected the yellow and creamy yellow 'eye'. We had *D. Sunburst* 'Tain' and hoped for more like it, but 'Tain' proved mainly sterile and that line of breeding seems to have petered out. Yamamoto again with *D. regium* hybrids such as Mary Caine, Mont Blanc, etc. and using the Japanese species *D. regale* has in many cases blotted out the dark 'eye' in mauve-purple and red-lavender flowers also, and produced most beautiful yellow and even orange-yellow labellums. I mentioned earlier in this paper that we also have broken through this colour barrier with Felicity and the *D. wardianum* line of breeding but as yet not nearly in as many crosses. In the yellow field I feel that we are well in front — particularly in regard to form, but then we do not have to contend with a market such as overseas requirements demand.

Now, what of the future? With the introduction into Australia of large numbers of Japanese seedlings, plus named propagations of quality awarded plants, a most exciting period has been initiated. A wise precaution has been initiated. A wise precaution has been initiated. A wise precaution has been initiated. I have given expression to my confidence that we could we but look a few years ahead we should visualise further revelations. We already find colour in one; in another substance; in a third size; in a fourth beauty of form; in a fifth purity and so on. These will be multiplied by division, and in addition there will be assimilation and intermixture of their high qualities by continuing hybridisation. The variety in colour and form appears to be infinite.

Finally, my friends, in the culture of this beautiful genus let us always remember one thing; they are not endemic to these shores. This land is not their home. Implanted in the breast of each one of these little gems is a deep and indissoluble attachment to the country, to the climate, to the conditions in which their forebears originated. They have grown to like it here and have flourished and in so doing have brought us much joy and pleasure.

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*New generation
softcane dendrobium
hybrids*

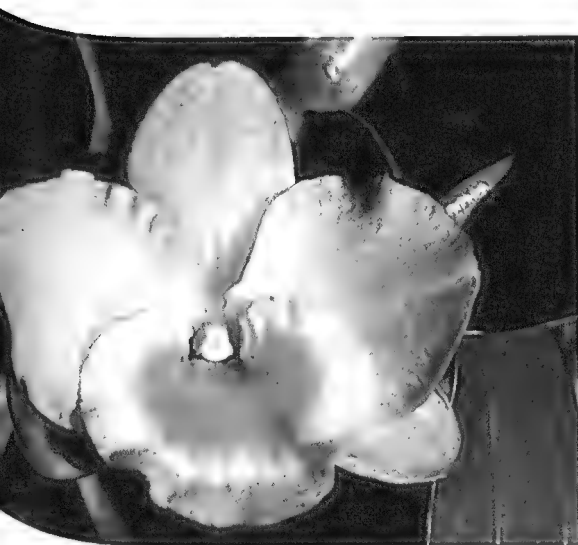


Above and left: Two clones of a very successful cross made in Sydney. The cross is from the parents *D. Felicity* and *D. Winifred Fortescue*. While as yet unregistered the cross has become widely known as *D. Felicity Fortescue*. The original hybridiser is unknown but could be one of four people, three of them unfortunately deceased which probably accounts for the lack of registration. A large number of this grex was sold by the Wondabah nursery so it is widely distributed. The cross demonstrates Mr. Spence's theme that vitally interesting softcane hybridising is taking place in Australia. The clone above has been given the clonal name 'Powder Puff' and the one on the left 'Margaret Blacklow'.

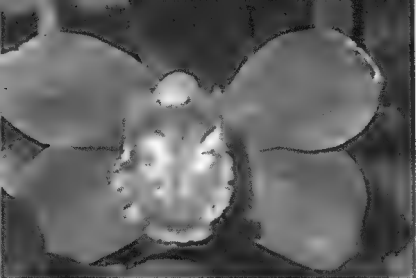
Photos on this page and cover are by Mrs. Joyce Spence of plants flowered by Mr. Harry Spence.



Above: *D. Glorious Rainbow* is a cross registered in 1968 with *D. Permos* and *D. Valademos* as parents. This clone of the cross demonstrates the outstanding breakthrough in colour achieved by Mr. Yamamoto of Japan.



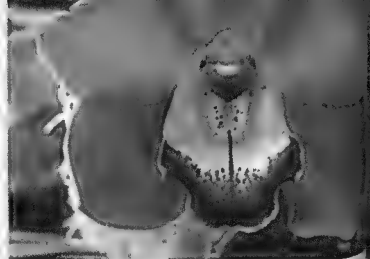
Left: Mr. Yamamoto registered this cross of *D. Malones* in 1974. Matings of such fine Japanese clones with the best Australian plants have been made. Many of these are expected to flower shortly.



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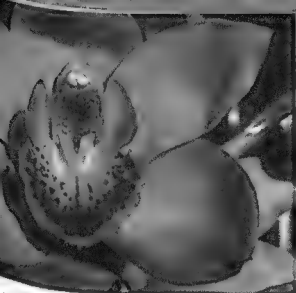
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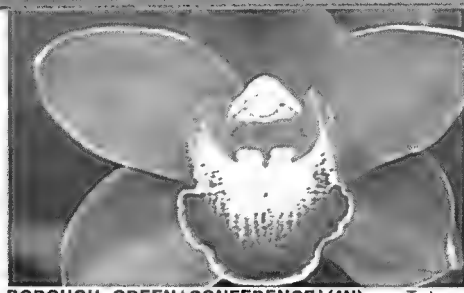
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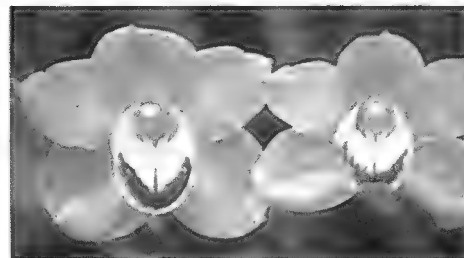
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"OID" (DR. D. WIMBER — PROCEEDINGS
MOST BY THE USE OF COLCHICINE, THE
50% CONVERSION.**

STANDARD CYMBIDIUMS — FLASKS

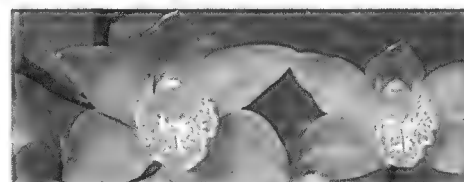
- (MOST READY FOR IMMEDIATE DELIVERY)
- SENSATION 'MELITA', HCC/AOS x TAPESTRY 'RED GLORY'.** \$80
Melita is probably the most famous of all the Sensations. Red Glory' (Khyber Pass x Voodoo) is a magnificent vibrant red of rich plush-like quality. The colour is a gorgeous rich, deep, dark, dahlia red with a very broad white lip banded blood red. It has long arching spikes of 15-18 blooms. The predicted result of the cross is well proportioned, shapely, show bench type, deep red blooms. Colchicine treated.
- SUSSEX CASTLE x MELINGA 'RUM JUNGLE'.** \$50
Pure-colour train improvement cross. Expect ultra early (May). All progeny will carry P.C. factor. Colchicine treated.
- WYANGA (Wyanga 'Supreme' x Wyanga 'Elanora', AD/NSW).** \$50
To improve the green pure-colours. All progeny will at least carry P.C. factor. Expect intense greens — some early. Colchicine treated.
- WYANGA 'SUPREME' x SLEEPING LAMB 'GOLDEN FLEECE'.** \$50
Expect very early yellows and greens. All will at least carry P.C. factor. Colchicine treated.
- MELINGA 'RUM JUNGLE' x WYANGA 'SUPREME'.** \$50
Similar to above but ultra early. Colchicine treated.
- WYANGA 'NIGHTSHADE' x SUSSEX DAWN 'DOROTHY MAY'.** \$50
Similar to above. Expect better shape, not as highly coloured. Colchicine treated.
- ROYCE DUNCAN 'SUSAN HUGHES', HCC/NSW x CARIGA 'CANARY'.** \$50
Two renowned parents. The Cariga 'Canary' 4N gives some indication of the progeny here — superb yellows and greens. Colchicine treated.
- ROYCE DUNCAN 'SUSAN HUGHES', HCC/NSW x SUSSEX DAWN 'DOROTHY MAY'.** \$50
Two superb greens — the tetraploids will rate better than superb. Colchicine treated.
- SUSSEX DAWN 'DOROTHY MAY' x CARIGA 'CANARY'.** \$50
'Fancy' greens and yellows. From two outstanding breeders. Colchicine treated.
- SUSSEX DAWN 'DOROTHY MAY' x SIRAM 'MAXINE'.** \$50
The flowers in May and is of very good shape. Expect quality early greens. Colchicine treated.
- SENSATION 'MELITA', HCC/AOS x BEXLEY RADIANCE 'BEXLEY'.** \$60
Expect bright reds — half will be tetraploids — they will startle the world. Colchicine treated.
- ROYCE DUNCAN 'KURINGAI' x SIRAM 'MAXINE'.** \$50
Shapely early greens, and mainly polychromes. Colchicine treated.



LUNAGRAD 'ELANORA' (4N) HCC/AOS 1976 A (2N) — June flowers, 12.5 cm. Heavy producer of fine show bench and commercial flowers. Big potential as stud plants.



CARIGA 'CANARY' (4N) AND (2N) — Pictured in Denmark, February, 1977, where hundreds of plants of the tetraploid form exist — the diploids have now been discontinued.



WYANGA 'ELANORA' (4N) AND (2N) AD/NSW — June and August flowers, 12 cm. The 4N should prove to be the best green-pure colour show and stud plant for many years. Superb commercial flowers.



MIRETTA 'MEM. A. A. McBEAN' (4N) AND (2N) FCHS — The 4N has great show and stud potential as well as being a fine commercial orchid.

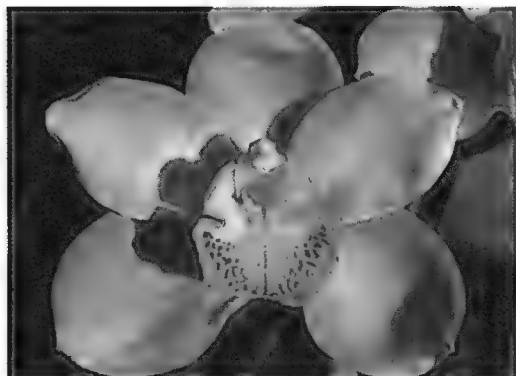


BALTIC 'AM' (4N) AND (2N) AM/RHS — The tetraploid was pictured in Oregon, U.S.A. in April, 1977. Note the improvement over the diploid and a longer-lasting qualities.

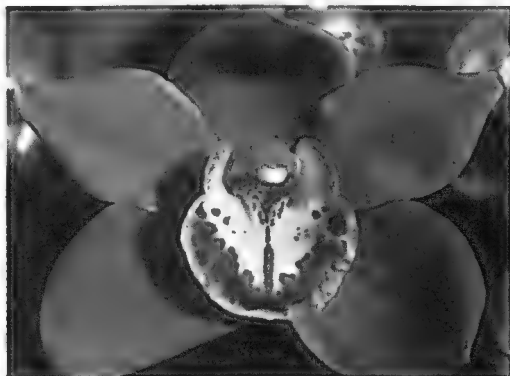
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NICKYANN 'RONA' HCC/A.O.C. 1977



MUSITA 'ELANORA'
 Champion Red, 1976 Spring Festival.

EARLY FLOWERING CYMBIDIUM SEEDLING OFFER:

- AO 1177 — TANUNDA 'BRAEVIEW' x LUNAGRAD 'ELANORA' CT. Here we combine the tetraploid cream parent with a massive converted Lunagrad 'Elanora' tetraploid form. This could be the tetraploid breakthrough for June-July flowering whites, pinks and greens.
- AO 849 — TANUNDA 'BRAEVIEW' x WIENA 'GOLDEN GOBLET'. Tanunda description under 841, coupled with a rich intense gold that blooms early August. Golds and whites of extra large size and heavy texture for July blooming in Australia.
- AO 851 — WIENA 'GOLDEN GOBLET' x PEETIE 'STEADFAST' FCC/R.H.S. The beautiful deep gold Wiena crossed with the ORCHID ADVOCATE'S CYMBIDIUM OF THE YEAR 1976, Peetie 'Steadfast'. The huge 5½" Peetie of clear green and blooming in June will ensure really class July greens and golds here.
- AO 952 — PEETIE 'EL DORADO' x WIENA 'GOLDEN GOBLET'. This Peetie is a large clear brown bloom with excellent spike habit. Coupled with the deep gold, expect July flowering golden browns of large size. One we really recommend.
- AO 846 — SIRIUS 'JULIE' x RINCON 'CLARISSE'. We find Rincon being listed as one of the really outstanding parents of early blooming cym. Here the combination of two pinks gives us very early lolly pinks for May-June flowers in Australia.
- AO 836 — EARLYANA 'THOMPSONS' x C. mastersii Var. ALBUM. Unique crossing to give heavy textured whites, of medium size on compact plants for June flowering in Australia. Possibly miniature habit of growth.
- AO 841 — RINCON 'CLARISSE' x TANUNDA 'BRAEVIEW'. Here is an early flowered crossing that we feel confidently will create a riot when they flower. Tanunda is our large creamy white tetraploid parent which blooms in June. With the famous pink Rincon expect September quality blooms for the May-June market. (Australian blooming times).
- AO 844 — SAN MIGUEL 'LIMELIGHT' x TANUNDA 'BRAEVIEW'. Tanunda description under 841, coupled here with the famous green parent that has produced many champions and we have the best potential for May-June yellows and-greens of real class.

The above 8 Cymbidium Seedlings \$3.50 each or,
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PROLIFERATION OF ORCHIDS

W. R. SMOOTHEY

In the March '77 issue of the "Review", Kevin McFarlane brought to our notice some interesting results of his personal practical use of a hormone paste for developing keiki plantlets on phalaenopsis flower stem nodes.

It is worthwhile recording that Kevin on his return from a trip to Hawaii in 1973 gave me a bottle of colourless liquid called "MAINTAIN" which was then being used in Hawaii to proliferate desirable forms of pineapples and he asked me whether I would like to find out if it worked on orchids. The chemical composition of the liquid was not known by us but it was said that in more concentrated forms it is a systemic herbicide. I was concerned that the liquid might be a Carcinogen so I applied some of the liquid to test plants of various genera by means of a piece of cotton wool held in tweezers and finally draped the saturated cotton wool around and over a plant of *Sophranitis grandiflora*. This plant was the minor half of a plant growing on a piece of treefern fibre — I had cut the rhizome sometime previously. The usual habit of this plant (before division) was to produce two (2) leads each year. The untreated plant (half) produced its two leads but the treated plant (half) produced fourteen (14) leads. Following on this I applied "Maintain" to other plants by wrapping cotton wool (twisted in a spill) around the base and saturating it by the aid of an eye dropper. Keikis were produced on every genus treated. Some of the results were:

- Aerides odoratum* — nine (9) keikis.
- Paphiopedilum* Lady Kitty 'Laura' — eight (8) keikis.
- Paphiopedilum delenatii* (small plant) — four (4) keikis.
- Cymbidium* Golden Nugget — five (5) keikis.
- Ascocenda* Yip Sum Wah — six (6) keikis.

Some of the test plants such as miniature cymbidiums and a *Catasetum roseum* were chewed up by my neighbours' Red Setter pup (the pup didn't proliferate at that stage because I couldn't catch it). An interesting result occurred in the case of an apparently spent back bulb of *Cym.* Anita 'Reve Rose' where two more leads were produced after treating the back bulb with "Maintain".

Kevin heard in outback Cairns a radio talk to pineapple growers and obtained for me a copy of the text. The relevant part was as follows:

"Today I will discuss the special case relating to the small quantities of the selected material — Queensland Cayenne [Pineapple species] — that was distributed last year by the C.O.D. Industry Farm Committee. These plants should be ready for initiation soon in many cases. Because it now exists on farms in only small numbers, propagation of this clone should be given priority. The new chemical — *Chlorfluronyl* — can be used to greatly increase slip populations. Where you might normally get two to four slips on a plant, with this chemical you can get up to 20 usable slips if you use it correctly. There are a few critical facts about the use of this chemical. First of all, the timing of the treatment is extremely critical — it must be applied 25 to 29 days after [flower] initiation for best results. Therefore the plants must be forced — it's the only way you can be certain of the timing. It has also been shown that SNA or *Ethrel* only should be used — BOH and *Ethylene* give fewer slips. Secondly the only correct concentration is 200 p.p.m. of *Chlorfluronyl*. So mix exactly as recommended or results may not be satisfactory. Lastly, while there will be some increase in the number of normal slips on the peduncle the mass of slips occur on the fruit itself. These fruit-slips need to be harvested at full fruit ripeness and will be small, only about two ounces, but usable. The fruit itself will be badly deformed and must be discarded — they are of no value and must not be used or eaten.

"The very small quantities of *Chlorfluronyl* you will need will be available through local co-operatives labelled 'Maintain C.F.125'."

Amongst other things this confirmed what I had been informed — namely that "Maintain" was probably *Morphaccin* which means simply that it could change the form of the flower or plant.

The Queensland Cayenne referred to is a highly desirable new form of pineapple and at the Sydney Royal Easter Show 1977 I took the opportunity to discuss with Wes. Rudd of Palmwoods, who was on the Queens-

land District Exhibit and is a pine grower, some of his practical experiences in the use of *Maintain*. He gets up to 50 usable slips but had problems. The initiation previously referred to at 25 to 29 days, is flower initiation which is not hard to determine with most orchids.

On the matter of *Morphaccin* I found that not all genera were affected in my limited trials. For instance *ascocendas* were not affected but *Aerides odoratum* was badly affected in its flowering in 1975, but flowered magnificently in 1976. This would suggest that this factor is transient only.

Another observation of value is that while many genera with the aid of "*Maintain*" produce keikis with good roots other genera do not. I have certain views on this and am working on it.

But you may well ask: "Why risk your plants?" A number of answers suggest themselves, such as:

- (a) Fissure culture has not been successful, I'm told, in all genera, and many orchid lovers have not the facilities for such culture but wish to proliferate plants that have some special appeal to them.
- (b) The *Aerides odoratum* plant referred to was the only known plant from an outstanding clone formerly owned by a well-known Sydney grower now deceased (he was known as "Mr. Vanda" — the late Tom Wearne). The keikis I have will ensure the continuance of this most desirable plant.
- (c) Professor Ted Schelpe of the Bolus Herbarium, University of Capetown, told us at the 6th W.O.C. in Sydney that one species of genus *Disa* was reduced to one known plant. Its conservation was a major issue. If it was fenced it could attract undue attention and if left in the wild, it could be killed or eaten or could just die. I've suggested that "*Maintain*" be tried on an allied species and if successful it could be tried on the lone plant.

You may have a plant that is dear to your heart or by sheer merit warrants survival. Doesn't it seem that "*Maintain*" may be the answer? I've discussed with *Ciba-Geigy* the matter of making the material available through their outlets.

You will of course realise that I'm not a scientist and am only relating my own practical experiences in non-technical

language. I've related these to many people over the last three or four years and in fact elaborated on them in the opening address to the South African Orchid Conference in Capetown in September, 1976. I have also spoken officially to Societies in Australia including the O.S. of N.S.W., the North Shore O.S., the Sydney O.S., and a combined meeting of North Coast Orchid Societies at Lismore in March, 1977.

Kevin's and my experiences are not intended to be guarantees but are given in good faith from actual practice. You will find some useful information in another article in this issue of the Review and also in the Proceedings of the 8th W.O.C.

In turn I'd like to hear of your successes — or even failures — so that we may all profit by the sum of our knowledge and experience.

15 Merlin St., Roseville, N.S.W. 2068

Townsville O.S.'s 30th Anniversary

When Mr. Stan Brock came to Townsville from Maryborough as a teacher he brought the idea of forming an orchid society. There were a few people in Townsville growing orchids and they joined with Mr. Brock in the lounge of his home to form the Society. Names recalled are Mr. P. K. Searle, Mr. E. Nott, Mr. Phil Bretherton, Mr. Stan Short and Mr. R. P. Kirke.

A notice advertised in the *Bulletin* invited people interested in orchids to a meeting, and on a Friday in June, 1947, our first gathering of 21 citizens were drawn together in Willmetts Chambers. At this meeting Mr. R. P. Kirke as Chairman, Mr. P. K. Searle as Secretary, Mr. H. T. Wooster, Mr. Sim, Mrs. E. Nott as Committee took on the task of drawing up rules.

July 2, 1947 was the first election of officers and 21 members were enrolled.

Patron Dr. J. Breinl, President Mr. R. P. Kirke, Vice-Presidents Messrs. C. Freeman, S. Brock, Stan Short and Mrs. E. Nott, Secretary-Treasurer Mr. P. K. Searle, Technical Adviser Mr. S. Brock, Committee Messrs. C. Dette, J. Sim, P. Bretherton, Johnstone and R. Kennedy.

Now 30 years after with a membership of 100 or more, names brought to mind as Presidents who have kept the Society on the road to success are Messrs. Kirke, Berge, Neilson, Tate, Warner, Hind, Merritt, Watson, Walters, Tooth, Greenway and Ludwig. Our meetings are the fourth Friday of each month at the Royals Amateur Cycle Hall, Stuart Drive. Visitors are welcome.

INVITATION TO A FIELD DAY

The Townsville O.S. is holding a Field Day on Sunday 28th August. Visits will be made to many of the outstanding collections in the Townsville area. Any orchid enthusiast visiting Townsville at that time is cordially invited to attend. For details contact secretary Mrs. M. King, P.O. Box 83, Townsville 4810.

KEIKI INDUCTION USING AUXIN ANTAGONISTS

R. D. MILLER

The following review is offered for the guidance of those who wish to apply the methods of orchid propagation described by K. McFarlane (1) and by J. Arditti and associates (2), (3).

Some sixty experimental reports from as many different places have been examined in an effort to find practical procedures among varied and often contradictory data. At the risk of dampening enthusiasm it is necessary to begin with some warnings.

First, chlorflurenols and iodo-benzoic acids, the two most active types of compound in adventitious shoot initiation, are very closely related to cancer-producing and hyperthyroidism-imitating compounds respectively, and must be treated with the same respect as, for example, parathion.

Also, there is a report of these agents acting upon nearby untreated plants by a seeming 'volatility effect', so that it appears advisable only to use them outdoors or in sealed or laminar flow cabinets. However, cinnamic acid and iso-leucine are non-toxic and non-volatile.

Finally, bear in mind that these materials are still experimental and results are still partly unpredictable. All results should be carefully noted, together with all circumstances, for the future guidance of yourself and others.

The mode of action of chlorflurenols (CF) and tri-iodo-benzoic acid (TIBA) appears to be the pre-emption of auxin (IAA) receptors in the plant cell. This binding is irreversible, and the cell will behave in an auxin-free manner thenceforth. In the normal state there is a constant competition between IAA and natural, reversible auxin antagonists, such as coumarins and cinnamic acid. However, their binding being reversible they are readily dispersed in the normal metabolism of the plant. Naphthalene-acetic acid (NAA) acts like IAA, but, like CF, it binds irreversibly, and, if applied first, will prevent CF from binding.

Apical dominance, the thrust of the main stem at the expense of side branching, appears to be effected by a constant flow of IAA back from the leading meristem toward the roots, which are thereby proliferated. Hence, the effects of CF can be expected only below

the point of application, and root inhibition will be the most important of these. This suggests that NAA should be applied below CF to limit its field of action. If all goes well, the new meristems will grow away from the CF-modified cells, and normal tissue is thereafter formed, as the normal flow of IAA is resumed. Cuttings of french bean and *Justicia* have been reported (4) to root better when treated with CF then NAA than with auxin alone, while *Coleus* has spontaneously reversed initial root inhibition.

A Polish group (6) added from 0.01 to 10.0 ppm of CF to cymbidium liquid and agar meristem cultures. More protocorms were produced per inoculum, but as dosage increased, so did inhibition of shoot, rhizoid and root formation, as well as fusion of cotyledons and a range of distortions of shoots and leaves and freakish growths.

Such distortions are responsible for the name 'morphactins'. They arise from differential growth rates of tissue components having varying requirements for auxins. One curious effect is blockage of geotropism, the normal trend for shoots to go up and roots down. Other Polish work on tobacco meristem cultures at 10.0 to 40.0 ppm merely caused up to 25% inhibition of growth rate. Japanese work (7) with tobacco cultures using CF and kinetin (K) achieved 100% shoot differentiation using (a) CF 0.1 ppm + K 2.0 ppm, (b) CF 0.1 ppm + K 10.0 ppm and (c) CF 1.0 ppm + K 2.0 ppm. In this case CF acts paradoxically like NAA. However, the chromosome counts ranged from 6 to 96 in the resulting plants.

One interesting aspect of morphactins is the feminization of unisexual plants like papaya, and the induction of predominantly pistillate flowers in cucumbers and melons. Possibly a judicious and timely application to members of the *Catasetum* alliance could regularly produce bi- and tri-sexual arrays of flowers on the one plant. However, any swelling pods should be held suspect, as CF also causes unpollinated fruiting.

Flowering may be initiated, but at the same time delayed, by CF. Gibberelic acid is compatible with CF, and may favourably influence subsequent flowering. Benefits in this field would be more likely from lateral

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If you are committed to orchids and their care may we offer you on an exchange basis four weeks holiday late August, September or early October, 1977, in our home 10 Queen Street, Townsville.

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- 115 Lc. Culminant 'La Tuilerie' x Self — Purple.
- 139 Milt. clowesii x Odm. biconiense — Pink.
- 149 Angraecum glyrymae 'Penn Valley' x Self — Green and White.
- 151 Bc. Mt. Anderson — Pink.
- 155 Blc. Nortela 'Bel Air' x Blc. Crispin Rosales 'Jungle Gem' — Purple.
- 156 Blc. Normans Bay 'Low' x Lc. Fran Asher — Velvety Purple.
- 158 Odm. biconiense x Gomesa recurva — Pink.
- 161 (Blc. Goldenette x Lc. Christopher Gubler) x Lc. Danae 'Mariana' — Yellow.
- 162 Bc. Miranda 'Chartreuse Queen' x Blc. Normans Bay 'Low' — Purple.
- 166 Onc. sucephalum x Odm. biconiense — Pink, Yellow.
- 167 Lc. Eva Robinson 'FCC' x Lc. Lee Langford 'Copper Queen' — Wine.
- 170 Odm. biconiense x Onc. gracile — Pink, Yellow.
- 172 Lc. Queen Mary 'FCC' x C. Mrs. Medo — Maroon.
- 173 Blc. Hemlock Pass 'Bel Air' x Blc. Sunset Gorge — Green.
- 212 Onc. maculatum 'Snyder' x Brassia gireouldiana — Brown and Yellow.

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flowering types, e.g. Cymbidiums, than from terminal types, e.g. Cattleyas. However, resulting flowers may have fused petals or other malformations. These increase with dosage.

The effect of morphactins on all growth and floral functions can be expected to vary with the plant's status in its annual growth cycle and also with the type of cycle. The functions of auxins are much more numerous and complex than those mentioned above, hence the side effects of auxin inhibition could be equally varied.

While much of the published work refers to spray application, safety requires that the application of morphactins should be in a non-volatile, non-liquid form. The best form appears to be a solution in pure unperfumed lanoline, to be applied with a small water-colour brush, using rubber gloves and in open air. 0.3% chlorflurenol in lanoline has been demonstrated to be effective in producing typical results (8).

I maintain open-ended files on new developments in this and related fields of applied plant physiology and will be pleased to supply further details on request. Conversely, would appreciate full, legible details of any readers' experiments, no matter how modest, nor, especially, how unsuccessful. A well documented fiasco is the best defence against its repetition. Good sprouting!

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102 Kent St., Epping, N.S.W. 2121

NEW VENUE FOR EASTWOOD O.S.

The Eastwood and District Orchid Circle C.N.S.W. now meets at the Presbyterian Church Hall Rutledge Street, Eastwood. Meeting night is still the first Wednesday in the month. Secretary is Mr. J. Allen, 31 Hampden Road, Pennant Hills 2120. Phone 84-1903.

ILLAWARRA'S NEW MEETING PLACE

The Illawarra District O.S. (N.S.W.) has a new meeting place, namely Wynham Recreation Cottage in the grounds of Lysaghts Steel Works, Old Port Kembla Road, Port Kembla. This can be reached via Five Islands Road, turning left at the oval into Old Port Road, then left again into the Lysaghts C.R.M. Works. The Society meets the third Thursday of each month and the secretary is Mr. Astill, 14 Brookfield Avenue, Warilla 2528.

NINTH WORLD ORCHID CONFERENCE

Wide Choice of Tours

In the March issue appeared summaries of the tours organised on behalf of the Australian Orchid Council, the Orchid Society of N.S.W., Orchid Society of W.A., Tropical Queensland Orchid Council, and Sydney's North Shore Orchid Society.

Since then two more tours of great interest have been announced. Australians are offered a wide choice in time, cost and itinerary.

Read the March issue, page 43, and the details below, then contact the travel agent for the one that interests you most. You haven't much time and some tours may be limited.

VICTORIAN ORCHID CLUB TOUR 1

This lasts 22 days, leaving Melbourne on the 6th January, 1978. Three days will be spent at Singapore, with three half-day tours and free time. Then on for two days at Kuala Lumpur. Then two days are spent driving through the Cameron Highlands to Penang for three days.

A morning flight to Bangkok arrives in time for a plane to Chiangmai in the far north of Thailand. This is jungle and orchid country and village life is unsophisticated. After two days the party goes by coach and river boat to Chiangrai.

On Wednesday 18th, Bangkok is again reached in time for a week's Conference activities.

Return from Bangkok is via Singapore to Melbourne, arriving on the 27th January.

Present cost with shared accommodation is \$1,318.00. Single room supplement \$167.00.

VICTORIAN ORCHID CLUB TOUR 2

Up to Wednesday 25th, this tour is identical with tour 1. Then return is via Hong Kong where three days are spent, followed by another three days in Manila. The party arrive back in Melbourne mid-morning of the 2nd February.

Shared accommodation cost is \$1,653.00. Single room supplement is \$242.00.

VICTORIAN ORCHID CLUB TOUR 3

This is for 16 days, leaving Melbourne 12th January. It gives three days in Singapore, and three in Penang. The party will arrive in Bangkok on the 18th January.

After the Conference return is via Singa-

pore to Melbourne by mid-morning of 27th January.

Cost, shared twin \$980.00. Single room supplement \$105.00.

EXTRA COSTS

Luncheons and dinners are extra, as well as normal day to day items such as laundry, telephone, liquor, and local tours made in free time. Costs are those prevailing in March 1977, and could be increased by inflation.

The Conference registration fee of \$US55.00 is also extra. Optional extras are the closing Ceremony Banquet \$US20.00, and the Conference proceedings \$US20.00.

FOR ACTION

All these tours are organised through the ANZ Bank Travel Department and application should be made to the bank. Firm reservations will be made upon receipt of a deposit of \$100.00 per person and balance of payment will be due 40 days before departure from Australia.

The Queensland Orchid Society tour below is also through the ANZ and the same conditions apply.

QUEENSLAND ORCHID SOCIETY TOUR

This tour covers 19 days and 17 nights and visits Singapore, Bangkok, Chiangmai, and Hong Kong, departing Brisbane 12th January.

Five nights are spent in Singapore and there are two half-day tours. Bangkok is reached by direct flight on Wednesday, 18th January in time for the start of the Conference. On the 21st the party flies to Chiangmai for two days in this most interesting area, then returns to Bangkok for the remainder of the Conference.

On Thursday 26th, the party leaves for Hong Kong and stays there for three days. Return is by direct flight Hong Kong to Sydney, then a connecting flight to Brisbane.

Cost sharing twin accommodation is \$1,359.00. Single room supplement \$165.00.

NINTH CONFERENCE DETAILS

For full information on the Conference write for the special Conference booklet. It may be obtained from: The Secretary, Ninth World Orchid Conference, P.O. Box 9-22, Kasetsart University, Bangkok, Thailand.

SPECIAL NOTICE

We are moving to DURAL as from 1st July, 1977

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Dendrobium Conanthum; D. Discolor; D. Lineale (from Bougainville, May River and Wulai Island); D. Musciferum; D. Warianum; D. Streblosceras (Tangerine).

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ESSENTIALS OF ORCHID NOMENCLATURE

RONALD KERR

After more than a century of International Conferences on Botanical Nomenclature a standardised method of describing and naming plants is now in use throughout the world.

If anyone desires to be taken seriously on matters pertaining to plant names they need to adhere to this system. To some folk this may appear to be of interest only to scientists but orchid growers soon learn how unreliable and confusing common names can be when applied to a plant family of over 660 genera and 20,000 odd species, plus nearly 40,000 hybrids.

Nevertheless in society bulletins and on plant labels, and even with awarded plants, departures from the international code are the rule.

Knowledge of the essentials of nomenclature can increase your appreciation of orchid books because a name in correct form is a kind of shorthand. It indicates at once whether a plant is a species or a hybrid, and whether it is an outstanding form. The generic name is an indication of growing habit and a general guide to source. A species name indicates locality origin more precisely. A hybrid name indicates the breeding line.

Further, a correctly written name enables its history to be traced. A species history can be traced through botanical reference books, and a hybrid through *Sander's List of Orchid Hybrids*.

THE BASIS OF ORCHID NOMENCLATURE

The data below is an abridged version of details in *The Handbook on Orchid Nomenclature and Registration*. Refer to the end of this article as to where you can obtain a copy. This book covers the needs of the orchid grower. A botanist uses the *International Code of Botanical Nomenclature* and naturally will have access to a botanical reference library. Anyone interested in checking this botanical code should refer to the public library of his home State.

Orchid names consist of two fundamental parts somewhat like a surname and a given name. The surname portion, known as the *generic name*, always comes first and is written in *Italics* and with a capital letter. Example: *Dendrobium*; *Cattleya*. It is sometimes referred to as the *First Term*.

The given name portion is the *Second Term* and is applied to a group within the genus which is unlike any other group and breeds freely within its group. It is called the *specific epithet* and is always written in *italics* without a capital. Example: *Dendrobium teretifolium*.

When *italics* are not possible, as with a typewriter, the *collective epithet* which is a term for the full name, should be underlined.

This binomial or two name system was first enunciated by Linnaeus over two hundred years ago and this is a most interesting story in itself of stupendous philosophical significance. The chief virtue of the binomial system is that it can be added to — or altered in the light of experience — without upsetting fundamental classifications.

The International Code recognises supplementary botanical categories such as sub-genus, sub-species, variety, and form. These classifications apply to natural genera and species NEVER to hybrids. Where part of a name these categories are always in roman type.

Examples: *Dendrobium teretifolium* var. *fairfaxii*.

Dendrobium teretifolium var. *fairfaxii* fma. *aureum*.

Abbreviations recognised are: species (singular) sp.; species (plural) spp.; variety, var. or v.; forma, fma.

The variety is a *Third Term* and is known as the *varietal epithet*, and all three terms indicate the *varietal name* of the plant. A capital letter should not be used.

A particularly good clone of a species which is garden raised may be given a *cultivar epithet*. It is written in roman type with a capital letter and must be in single quotation marks. When added to the varietal name of a species it becomes a *Third Term*, and added to the varietal name of a botanical variety it is a *Fourth Term*. The complete combination is the *cultivar name*.

Example: *Dendrobium kingianum* 'West's'.

Where species of the same genus are being described the first generic name should be in full and the remainder can be abbreviated. Example: *Dendrobium speciosum*, *D. kingianum*, and *D. moorei* are closely related.

If a generic name is used in a non-botanical sense it has no capital and is not in

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italics. Example: "I have a pterostylis in my collection".

The *italicised* portion of species names are latinised and conform with the rules of Latin grammar. Some terms, such as *forma* meaning form are also latinised. These Latin rules are very interesting but not relevant to the use of the International Code.

NAMES OF NATURAL HYBRIDS

If a cultivar hybrid of the same parentage as a natural hybrid is raised, and the latter has a name which has been described and published by a botanist, then it can only be registered with the same name. However, both natural and man-made grexes conform to the botanical rules, thus the natural hybrid must have a specific epithet all in lower case *italic*, and the cultivar printed in roman with a capital. It would be useful to apply this to your labelling because of the story it tells.

Should a natural hybrid be found and named by a botanist after a cross has been registered then the latter is retained for horticultural purposes.

CULTIVAR HYBRIDS

Crosses between orchids are registered with the Royal Horticultural Society of England as the International Registering Authority. Generic names are identical with non-cultivars except when intergeneric crossing occurs and a new genus is created. The new genus is given a name based upon a combination of the two generic names. Thus a crossing of *Brassavola* and *Cattleya* is known as a *Brassocattleya* and is abbreviated *Bc*. Cross this with a *Cattleya* and you have a *Brassaeliocattleya*, usually written *Blc*. A fourth genus in the breeding complicates the situation so the practice was adopted of naming a quadrigenetic hybrid after a prominent botanist or grower and adding the ending *ara*. A *Blc*. crossed with a *Sophranitis* is a *Potinara*.

With man-made hybrids the *First Term* or genus name or abbreviation is a capital and is in *italics*. All seedlings from the same cross comprise a *grex*, and hence the *Second Term* is known as a *grex epithet*. It is printed in roman type and with a capital letter.

A single seedling is known as a clone. Should it be a superior form it may be propagated to make a great number of plants. These may be given a *Third Term* name known as a *cultivar epithet*. The cultivar epithet is always written in roman characters with a capital letter and has single 'quotation

marks'. As mentioned earlier the cultivar epithet may also be applied to a species orchid, in which case it may be a *Fourth* or even a *Fifth Term*.

It is usual to give cultivar epithets to awarded or unique clones.

Example: *Cymbidium* Sensation is the registered name of the cross for which the formula is *C. Spartan Queen* x *C. Fascination*. *C. Sensation* 'Chianti', AD/OSNSW is the cultivar epithet, or clonal name, of a distinctively coloured *C. Sensation*.

INDICATING AWARDS

Awards are indicated by initials without periods. AM for Award of Merit; FCC for First Class Certificate; HCC for Highly Commended Certificate; AD for Award of Distinction. GM, SM, and BM mean Gold, Silver and Bronze Medal respectively.

In the same way the Awarding Authority is indicated by initials without periods. The Victorian Orchid Club is indicated by VOC.

Where the same award has been made by two authorities they are shown separated by a hyphen. An example is *Cymbidium Highland Mist* 'Lalchere', AM/AOC-OSNSW; another is *Odontioda* Florence Stirling 'The Duchess', AM/AOC-TOS. Note that initials of Awards following the collective epithet should be printed in SMALL CAPITALS.

COMMON ERRORS

The foregoing outlines the major considerations in correctly labelling orchid plants. Perhaps the best way to summarise them is to list the most common errors in labelling or when writing about orchids. These are:

Using the word *specie* instead of *species*. *Species* is both singular and plural. *Specie* means metal money. When people talk about "my *specie* orchid" do they mean "my metal money orchid"?

Using double quotes (inverted commas) around a cultivar epithet. Single quotes are specified in the Code.

Breaking up abbreviations. *Brassocattleya* is one word and is abbreviated *Bc*. Hence *Blc*. not BLC or B.L.C.; *Slc*. not S.L.C.

Using a capital for a species specific epithet or *Second Term*.

Printing species names in roman type, or not underlining.

Incorrect spelling. Buy a good reference book on orchids, and use your society library.

Using all capitals for a complete name.

Capitalising a generic name when used in a non-botanical sense.

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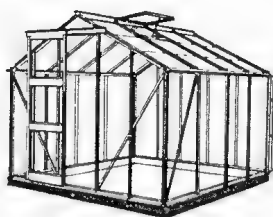
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CORRECT NOMENCLATURE AIDS CULTURE

Standardised nomenclature has philosophical importance. It tells a story at a glance. Botanists carry the story of species further by inserting after the plant name the initials or name of the describing botanist. Sometimes synonyms and source details are added — always so in a complete work. In this way the serious seeker can trace the whole history of discovery and classification.

With a hybrid any grower can check the lineage by referring to *Sander's List of Orchid Hybrids*.

Correctly written labels in your pots are a hallmark of good growing and you can add to their value by adding your own short code as a cultural guide. An example would be CA/F4/I/R976, where CA means Central America; F4 means flowers in April; I means intermediate conditions; and R976 means repotted in September 1976.

For a complete guide to orchid nomenclature the second edition of *The Handbook on Orchid Nomenclature and Registration* is now available. To obtain it send your bank draft for £2.25 sterling (includes surface postage) to The Royal Horticultural Society, Vincent Square, London, SW1P 2PE, England. Copies of this article are available free from the Editor. Send S.A.E. to 57 Mt. Pleasant Avenue, Normanhurst 2076.

SUB-TROPICAL ORCHID COUNCIL

The Sub-Tropical Orchid Council of Queensland is a very active regional body.

It consists of the four Sunshine Coast Orchid Societies, Nambour, Maroochydore, Caloundra and Glasshouse Country, plus the Caboolture, Gympie, Maryborough and Bundaberg Societies.

Caboolture, a comparatively new society, hosted the fourth annual general meeting of the Council. During the year meetings were held in Nambour, Gympie, Maryborough and Bundaberg. The Council was represented at two meetings with the Queensland Orchid Society. Judging classes were held in Gympie.

Current officers are: Mr. Brian Pearce as President, Mr. Morrie Clench Vice-President, Mr. Dave English Registrar, Mrs. Doris Mitchell Secretary, Mrs. Nancy Henry, Assistant Secretary, and Mrs. Beryl Robertson, Treasurer.

CHARITY RECORD OF V.O.C.

Since 1961 the Victorian Orchid Club has helped the Victorian School for Deaf Children with the proceeds from each Spring Show. Like a ripple on still water this help radiates all over Australia because the Board of Management of the School has been instrumental in establishing the Victorian Deafness Foundation, and through it an Australian Deafness Council. The Council and Foundation are very actively engaged not only with alleviating but also with preventing deafness.

BOOK REVIEW***The New "Schlechter"***

Publication of the new *Die Orchideen* now extends to seven parts. The publishers, Messrs. Paul Parey of Berlin and Hamburg have undertaken a most ambitious project in this review of the entire orchid family.

It is more than a re-publication of the original work. The outstanding botanist Dr. Rudolf Schlechter certainly provided something more than the skeleton for this work in the original publication but Dr. Brieger is certainly surrounding the original with more flesh. And where necessary the original frame is being remoulded a little.

The end result is as complete a coverage of the world's orchids as it is possible to get in one work.

To date the parts published have covered mainly botanical orchids, although the genus *Masdevallia* with some 275 species is dealt with in Part 7. Eighteen representative species of *Masdevallia* are described. Photographs of four species show a whole plant and an enlarged flower so that most botanical details are apparent.

The seven parts to date provide an excellent over-all perspective which will be further enhanced when the vast subtribe *Epidendrinae* is covered in the next volume. From then on the major emphasis will be on orchids of horticultural interest.

Although printed in German a knowledge of Latin names and the help of a German dictionary will enable the enthusiast not familiar with the language to understand the fundamental classifications.

A second volume devoted to the cultivation of orchids is due to commence publication in parts. Now is a good time to catch up on ordering the seven parts already published for this is a work as monumental as the first *Die Orchideen*.

Each part is priced at DM 24 and may be obtained by sending your bank draft to the publisher, Verlag Paul Parey, 1 Berlin 61, Lindenstrasse 44-47, West Germany.

LOSS TO BRISBANE ORCHID SOCIETIES

Brisbane lost one of its best-loved orchid growers with the death of Don Carnegie in January of this year. Donny, as he was affectionately known, was a great little worker for many societies and a foundation member of the Native Orchid Society of Queensland, and was perhaps one of the most popular growers in Brisbane. He helped many novice growers to start a collection and he will be remembered as a tireless worker.

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PHYLLIS COTTON

QUEENSLAND ORCHID SOCIETY

Queensland Orchid Society Autumn Orchid Show was staged in the Conference Room of the Park Royal Hotel. This is a very commendable venue for an orchid show, the lighting and appointments highlighted the whole presentation.

The affiliated societies staged a number of large displays portraying themes, as 'Orchid Gems', 'Pipe Dreams', 'Orchids at Bay', 'Basket of Splendour' — The winner Redcliffe and Districts Orchid Society, carried a large number of quality blooms, artistically arranged.

Champion Orchid of the Show was *Cattleya* Hertha, carrying two blooms of a rich pink toning, good substance and texture, gaining an award of A.M. for its owners F. & B. Lorrimer.

The Reserve Champion and Champion Species Orchid went to the plant of *Euanthe sanderana* var. 'Katie' AM/QOS, presenting two sprays of shapely blooms.

Champion specimen of the Show was a basket of *Milt.* Purple Queen exhibited by Mr. P. K. Searle.

Orchid *Ble.* Malworth gained the Champion Honour in the Novice Section for Mrs. N. White.

The Society meets on the 2nd Monday in the month, in the Senior Citizens Rooms, McLachlan Street, Valley. Hon. Secretary, Mr. Rod Mackinney, G.P.O. Box 2002, Brisbane 4000. Phone 345 1916.

IPSWICH O.S. AUTUMN SHOW

Motor showrooms are becoming the popular place to stage an orchid show, and Merrells Motors, of Brisbane Street, Ipswich was the venue for the Society's Autumn Show held on the first weekend in April.

The rich blue carpeted floor, and natural brick trims, lend an ideal background for the colourful orchid blooms. Enthusiastic members arranged several attractive displays, from which the judges' selected *Lc.* Corflambo 'Royal Purple' x *Lc.* Bonanza 'Wasaschie' owned by Mr. Les Lobley, as Champion Orchid of the Show — a very nice shapely bloom.

The Society meets on the 1st Wednesday in the month in the Adult Education Centre, Brisbane Street, Ipswich. Mrs. Gwen Stumer Hon. Sec. Phone 201 0126.

GOLD COAST ORCHID SOCIETY

An orchid show, over the Easter period, especially at a tourist area, such as the Gold Coast, is always an attraction not only to the locals, but to visitors from other States.

The Society's Autumn Show on Easter Saturday and Sunday presented some well flowered Dendrobiums, cattleyas and vandaceous orchids, likewise the floral art sections attracted a numerous number of entries.

Possibly the orchid that got most of the admiration was *Cattleya* Gatton Glory x *Alae*. Ten very nice blooms in an unusual rich apricot shade, for which it gained the honour of Best Specimen. Owner Mr. J. Bailes.

The Champion Vanda was *V. Lenevat*. A rich strawberry pink toning with tessellation of magenta colouring and a spray of nine flat blooms. Exhibited by Mr. F. C. Start.

The Society meets on the 2nd Sunday in the month in the C.W.A. Hall, Burleigh Heads. Sec. Neil Wildesmith, P.O. Box 323, Burleigh Heads. Phone 075 35-5335. Visitors welcome.

EASTERN DISTRICTS O.S. AUTUMN SHOW

This is always a welcome event for the folk in and around the bayside area of Wynnum. A hard working committee leave no stone unturned to present a colourful display of orchids to greet you at the entrance, and this year was no exception. Orchids in a tiered display just inside the school hall made passing public want to see more.

At the other end of the hall on the stage a large display of colourful vandaceous plants, exhibited by Mr. Barry Paget, of Orchidworld, created a great amount of interest, especially as many had been grown in terra-cotta pots, with no potting medium, suspended near top of the bush house.

Champion Orchid was a very nice bloom of *Ble.* Fortune 'Grandview' tabled by Mr. Les Vickers.

The Society meets on the 4th Thursday in the month in the Guardian Angel School Hall, Bay Terrace, Wynnum South. Secretary Mr. F. Geary, P.O. Box 60, Wynnum Central 4178.

BRISBANE O.S. AUTUMN SHOW

The Charity Orchid Show staged in April each year at Zupps Motor Showrooms was this year another great success, and approximately \$1,600 will be handed over to The Queensland School for the Deaf.

Special emphasis was placed on the Queensland Floral Emblem — *Den. biggibum* v. *superbum* (Cooktown Orchid), featuring mass displays, and the Champion of this section was won by Mrs. Joan Zupp.

Not only was the quantity of orchids exhibited rewarding, but the quality most certainly enhanced the whole show, so much so, that the Champion and Reserve Champion Orchids, both gained Queensland Orchid Society Awards.

Euanthe sanderana 'Katie' was the Champion Orchid and gained for its owners Mr. and Mrs. Carter of Rochdale an Award of Merit. The Reserve Champion, a cluster cattleya, carrying two sprays of seven and eight blooms each, *Lc.* Adolph Hecker 'Ivy Gladys', was awarded a HCC. Owner Mr. F. C. Stark of the Gold Coast.

The Society meets on the 4th Tuesday in the month in the Holy Trinity Church Hall, Petersen Street (behind Hawthorn Street), Woolloongabba. Hon. Sec. Frank Copelin. Phone 397 2774.

ROCKHAMPTON ORCHID SOCIETY

Mr. Rod Elder President of the Rockhampton Orchid Society, reports a successful year. There has been increased activity with members visiting each others collections and also journeying to see members of neighbouring societies. The resulting interchange of ideas with other growers has helped members improve their collections, both in culture and the type of plants grown.

Society meetings are held on the fourth Tuesday of each month at the North Rockhampton Methodist Church Hall, Musgrave Street, North Rockhampton, at 8 p.m. Visitors welcome.



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Ira Butler Awards

During the February meeting of the Orchid Society of N.S.W. Mr. Eric Gordon, President of the Ira Butler Award Committee, presented the first two Ira Butler Memorial Awards.

These were for services to native orchid hybridising. The first recipient was Mr. Wal Upton for notable hybridising within the dendrobium section *Dendrocoryne*. Many growers will remember Mr. Upton's display at the Sixth World Orchid Conference in which he displayed nothing but hybrids he had bred using *Dendrobium kingianum* as one parent. This display was awarded a Silver Medal.

His crossing of the *album* form of *D. kingianum* with *D. tetragonum* var. *giganteum* produced some striking and robust clones of *D. Ellen*, undoubtedly the best forms of this hybrid to date.

Mr. Roger Bedford also received the Award for notable breeding. Mr. Bedford at first worked in close collaboration with the late Mr. Ira Butler, and later produced an outstanding hybrid in *Dendrobium* Peter from the mating of *D. fleckeri* with *D. falcorostrum*.

NATIONAL NATIVE HYBRID AWARD

A grower of an Australian hybrid may submit it for this Award, which is distinct from the hybridisers' award detailed above. Any Australian grower is eligible. It is essential that the plant must be submitted for a State Award.

Details of State Award judging and a colour transparency must be sent to: The Chairman, Ira Butler Memorial Award Committee, P.O. Box C106, Clarence St., Sydney 2000. Even if the plant may not have received a State Award the points given and the transparency will be retained for end of year appraisalment.

The Ira Butler Memorial Committee consists of three members appointed by the Orchid Society of N.S.W. and three by the Australasian Native Orchid Society, with Mr. Eric Gordon as independent Chairman. The committee reserves the right not to make the award in any year.

In the March, 1976 issue of "A.O.R." the address above was wrongly given as Box C108 instead of Box C106.

IRA BUTLER MEMORIAL FUND

Contributions to the fund to make the Ira Butler Memorial Awards self-perpetuating are welcome. Address is above.

Native Orchid Society of South Australia

This Society was formed on the 22nd March, 1977, when 48 interested people attended the inaugural meeting at the Goodwood High School. The meeting was chaired by Mr. Colin Jennings, President of the Orchid Club of South Australia.

Meetings will be held at Goodwood High on the fourth Tuesday in each month.

A committee was elected with Mr. L. T. Nesbitt as the first President and Mr. E. R. Hargreaves as the Secretary. Letters should be addressed to Mr. Hargreaves at 1 Halmon Avenue, Everard Park, S.A. 5035. Phones 293 2471 and 297 3724. Mr. Nesbitt's number is 261 1550.

Intending members are invited to contact either of these gentlemen.

The other officers and committee members are all very experienced orchidists. A programme of activities of great benefit to all orchid growers is in preparation.

The aim of the new Society is to promote the culture, propagation, conservation, and scientific knowledge of the native orchids of Australia. Already a library has been established. Mrs. Mary Earle, a committee member, is organising a seed bank for the benefit of members.

At the April meeting, Vice-President Mr. Peter Hornsby, gave a talk and slide programme on the orchids of the Mount lofty ranges. Plants were displayed and commented upon, and hints on seed sowing were given by Mr. Les Nesbitt.

Links are being sought with other native orchid societies, particularly The Australasian Native Orchid Society (A.N.O.S.).

The Native Orchid Society is now the ninth organised group devoted entirely to Australia's native orchids.

TOOWOOMBA O.S. TRIUMPHS

In his Presidential Report, Mr. Nev Douglas points out that they had displays at the Royal Show, at the Q.O.S. Autumn and Spring Shows, as well as two main shows and a display in the home town. Not a bad effort for a provincial society. But in addition a record which will stand a long time was set at the Queensland O.S. Autumn 1976 Show when Toowoomba won the Society Display section with a point score of 91.3 per cent.

A feature of the past year was the pleasant co-operation with the Toowoomba Native Orchid Society and the Toowoomba based Downs Orchid Society.

The Society meets fourth Friday, St. James' Parish Hall, Russell Street. Secretary: Miss E. Miles, 6 Somme Street, Toowoomba.

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WEST AUSTRALIAN SHOW DATES

Orchid Society of West Australia. WINTER SHOW. Booragoon Shopping Centre. Wed., 13th July to Sat. 16th during shopping hours. Set up night of 12th July. **SPRING SHOW.** See announcement under Fifth Australian Orchid Conference. Hon. Sec.: Mr. John Foley, 39 Stirk Rd., Alfred Cove 6154. Phone 37-6210. Meets 4th Friday in Science House, 10 Hooper St., West Perth.

Melville Districts O.S. SPRING SHOW. Held on Sat. 3rd and Sun., 4th July. For details contact Mr. I. Bailey, 33 Waddell Rd., Palmyra 6157, or the secretary. Conference registrants should arrive early and see this show. It's a fine opportunity to meet orchid folk before the Conference. The Melville O.S. meets 2nd Thurs. at the Roy Edinger Hall, cnr. Canning Highway and Stock Rd., Palmyra. Hon. Sec. is Mr. R. E. Lander, 29 Tain St., Applecross. Phone 64-2937.

Northern Districts O.S. SPRING FESTIVAL. Staged at beautiful Karrinyup Shopping Centre, the largest shopping complex north of the Swan River. Thurs. 22nd to Sat. 24th during shopping hours. Conference registrants given a special welcome. Sec.: Miss Joy Rogers, 6 Drummond St., Redcliffe. Phone 65-2407. Meets Scout Hall, Doyle St., Morley on 4th Monday of month.

NEW SOUTH WALES

Orchid Society of N.S.W. WINTER SHOW. Westfield Shoppingtown, Parramatta. Mon., 20th June to Saturday 25th during shopping hours. Setting up Sun. 19th. Australia's biggest winter show. **SPRING SHOW.** Roselands Shopping Centre. Mon., 19th September to Sat. 24th in shopping hours. Both shows will be open for one night to orchid growers only. These will be advised in the O.S. of N.S.W. **Orchid News.** Meets 4th Mon., St. James' Parish Hall, cnr. Liverpool Rd. and Highbury St., Ashfield.

SYDNEY METROPOLITAN AREA

Australasian Native Orchid Society. SPRING SHOW. Mona Vale Memorial Hall, Fri., 16th Sept. and Sat. 17th, 9 a.m. to 9 p.m., Sun. 18th, 10 a.m. to 4 p.m. A must for native growers. Show Marshal: Mr. N. Helliger, 4 Mangara St., Mona Vale. Phone 99-2468.

Bankstown Orchid Society. WINTER SHOW. Highway Methodist Church, 11th July. On meeting night, members' exhibits, visitors' table. **SPRING**

SHOW. 12th Sept. as above. Sec.: Mr. C. Fecknell, 223 William St., Yagoona. Phone 70-0348. Meets 2nd Mon.

Cumberland Orchid Circle. WINTER SHOW. Presbyterian Church Hall, 7 Castle Hill Rd., West Pennant Hills. Sat., 23rd July, 10 a.m. to 4.30 p.m. Plants to be benched 7.30-8.30 a.m., 23rd July, 1977, or may be left Friday at home of President, 121 Cardinal Ave., West Pennant Hills. **SPRING SHOW.** Carlingford Court Shopping Centre, cnr. Pennant Hills Rd. and Carlingford Rd., Carlingford. Shopping hours. Benching 7.00-8.30 p.m. Wed. and 7.30-8.30 Thurs. Meets 4th Wed. Sec.: Mrs. D. R. Jones, 121 Cardinal Ave., West Pennant Hills. Phone 84-3061.

Eastern Suburbs O.S. WINTER SHOW. St. Luke's Church Hall, cnr. Arden and Varna Sts., Clovelly. 13th June on meeting night. One visitors' class. **SPRING SHOW.** Same venue on 15th Aug. Members' and one visitors' class. Sec.: Mr. Ian Chalmers, 25 Turriell Point Rd., Carlingbah. Phone 525-7215.

Eastwood and District Orchid Circle. SPRING SHOW. Masonic Hall, Rowe St., Eastwood. Mon., 26th Sept., 1.00 p.m. to 10 p.m., Tues. and Wed., 10 a.m. to 10 p.m., Thurs. 29th, 10 a.m. to 9.30 p.m. Sec.: Mrs. E. Allen, 31 Hampden Rd., Pennant Hills. Phone 84-1903.

Five Dock R.S.L. O.S. WINTER SHOW. Five Dock R.S.L. Auditorium, 27th July, 8.00 p.m. Excellent prizes and trophies. A good one-night Show. **SPRING SHOW.** Drummoyne Civic Centre, Marlborough St., Drummoyne. Thurs., 6th Oct., 2.30 p.m. to 10 p.m., Fri. 7th, 10.30 a.m. to 10 p.m., Sat. 8th, 10.30 a.m. to 7.30 p.m. This show attracts the best late-flowering plants and should not be missed. Fine trophies. Many classes, particularly for species. Sec.: Mrs. Joyce Duncan, 102 First Ave., Five Dock. Phone 83-9072. Meets 4th Wed., Five Dock R.S.L. Club.

Ku-ring-gai O.S. SPRING SHOW. St. Andrew's Church Hall, Hill St., Roseville (a new venue for 1977). Fri., 2nd Sept., noon to 9.30 p.m., Sat. 3rd, 9.30 a.m. to 9.00 p.m. Prize-giving 8.30 p.m. Sat. Sec.: Mrs. J. Kelly, 31 Hinemoa Ave., Wahroonga. Phone 487-1089. Meets 3rd Mon., Pymble Community Hall, Pacific Highway, Pymble.

Lidcombe Hospital O.S. SPRING SHOW. Main Hall, Lidcombe Hospital. Fri., 9th Sept., noon to 9 p.m., Sat., 9 a.m. to 9.30 p.m., Sun. 11th,

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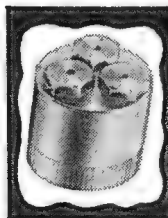
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Southern Districts Combined Show

Sutherland, St. George, Sydney and Bankstown Orchid Societies combine to stage this late **SPRING SHOW** in the *Gymea Community Centre*. Sat., 1st Oct., 11.00 a.m. to 9.00 p.m., Sun. 2nd, 1.00 p.m. to 9.00 p.m., Mon. 3rd, 9.00 a.m. to 5.00 p.m. Increased prize money. Champion Cymbidium \$50.00. Floral art open to all comers with \$25.00 for first prize. Show caters for fine, late Spring flowers. Enquiries to secretary Mr. Ken Hodges. Phone 525-5101.

10 a.m. to 5.00 p.m. Good show for cymbidiums. Sec.: Mrs. Patricia Moon, 34 Colane St., Concord West. Phone 73-3795. Meets 2nd Wed., Supper Room, Main Hall, Lidcombe Hospital.

Manly-Warringah O.S. WINTER SHOW. Narrabeena Community Centre, Oceana St., Narrabeena. Thurs., 23rd June, 7.30 p.m. Plant auction, culture session, visitors' exhibits. **SPRING EXHIBITION.** Mona Vale Memorial Hall, Fri., 26th Aug., 4.00 p.m. to 8 p.m., Sat., 8 a.m. to 8 p.m., Sun. 28th, 8.00 p.m. to 5.00 p.m. Stall, demonstrations, raffles, lucky door prize, exporting exhibit. Sec.: Mr. R. Barrack, 31 Wilson St., Harbord. Phone 93-2753. Meets 4th Thurs., Narrabeena Community Centre.

North Shore O.S. WINTER SHOW. Willoughby Town Hall, Wed., 1st June, on regular meeting night. **SPRING SHOW.** Arndale Shopping Centre, Frenchs Forest. Wed., 14th Sept. to Sat. 17th during shopping hours Variety of genera and quality is hallmark of this show. Sec.: Mr. R. J. Rochfort, 6 Dalrymple Ave., Lane Cove. Phone 42-2575. Meets 1st Wed., Willoughby Town Hall, near Chatswood railway station.

Parramatta and District O.S. WINTER SHOW. Wentworthville Community Hall on usual meeting night 26th July. **SPRING SHOW.** Sec.: Mrs. P. T. Phillips, 29 The Trongate, Granville. Phone 637-6797. Meets 4th Tues., Wentworthville Community Hall.

St. George O.S. WINTER SHOW. Rockdale Methodist Church Hall, Bay St., Rockdale, Tues., 5th July. One night show on meeting night, visitors welcome. **SPRING SHOW.** Venue above. Tues., 6th Sept., trophy night, Spring show and meeting. A friendly night, visitors very welcome. Sec.: Mrs. Jean Slattery, 12 Eddystone Rd., Bexley. Phone 50-7985. Meets 1st Tues. at Rockdale Methodist Hall.

Western Suburbs O.S. WINTER SHOW. Presbyterian Church Hall, Correy's Ave., North Strathfield. Tues., 12th July, regular meeting night. Visitors' plant table. Prizes. **SPRING SHOW.** Same venue and conditions, 13th Sept. Visitors will find these pleasant nights. Sec.: Mr. E. Lilliss, 12 Knocklay St., Ashfield. Phone 797-9995. Meets 2nd Tues. above address.

NEWCASTLE AREA

Newcastle District Combined Orchid Societies. **WINTER SHOW.** Garden City Shopping Centre, Kotara. Thurs., 14th July to Sat. 16th in shopping hours. Setting up Wed. 13th, 5.30 p.m. to 9.00 p.m. Judging commences 9.00 p.m. **SPRING SHOW.** Garden City Shopping Centre, Thurs., 29th Sept. to Sat., 1st Oct., shopping hours. Setting up Wed. 28th, 5.30 p.m. to 9.00 p.m. Sec.: Mrs. Frances Cusack, P.O. Box 186, Tor-

onto 2283. Phone (049) 59-1635. Combined Societies usually meet 1st Mon. of every 2nd month. Next meeting 6th June in Bolton Point Community Hall.

Newcastle Orchid Society. SPRING SHOW. MacKies Building, King and Auckland Sts., Newcastle. Wed., 7th Sept., 1.00 p.m. to 10.00 p.m., then Thurs. to Sat., 10 a.m. to 10 p.m. Held during Mattara week of Shows and Festivities — a fine time to holiday in the Hunter Valley. Sec.: Mr. Norm Hellier, 17 Stanley St., Merewether. Phone 61-2989. Meets 4th Tues., Masonic Hall, Beaumont St., Hamilton.

Boolaroo O.S. SPRING EXHIBITION. "BIG W" Shopping Centre, Jesmond. Thurs., 15th Sept. to Sat. 17th in shopping hours. Sec.: Mrs. J. Parker, 68 Mills St., Warners Bay. Phone 48-9109, business 54-7633. Meets 3rd Wed., Masonic Hall Lake St., Speers Point.

Swansea-Belmont O.S. SPRING SHOW. R.S.L. Memorial Hall, Swansea. Sat., 3rd Sept., 10.30 a.m. to 8.00 p.m., Sun. 4th, 10.00 a.m. to 4.30 p.m. Sec.: Mr. L. Ward, 16 Maneela St., Blacksmiths. Phone 75-1422. Meets 4th Fri., Masonic Hall, Gen St., Belmont.

Morisset and District O.S. SPRING SHOW. Bonnell's Bay Community Hall. Fri., 9th Sept., noon to 8 p.m., Sat. 10th, 9.00 a.m. to 8.00 p.m., Sun. 11th, 9.00 a.m. to 3.30 p.m. Sec.: Mr. Ken Fethers, 17 Lakeview Rd., Morisset Park. Phone Mrs. Frances Cusack, President, 59-1635.

N.S.W. COUNTRY

Byron District O.S. SPRING SHOW. Civic Hall, Mullumbimby, Fri., 16th Sept., 10.00 a.m. to 9.00 p.m., Sat. 17th, 9.00 a.m. to 9.00 p.m. Sec.: Mr. V. J. O'Connell, 1 Morrison Ave., Mullumbimby. Meets 2nd Mon., successive months at Mullumbimby, Byron Bay and Bangalow.

Casino and District O.S. SPRING SHOW. R.S.L. Hall, Canterbury St., Casino, Fri., 23rd Sept. and Sat., 24th Sept. Sec.: Mrs. D. J. Miller, 12 Clarence St., Casino. Meets 4th Fri. in Old Bowling Club House, Convent Pde.

Coffs Harbour O.S. SPRING SHOW. Supper Room, Coffs Harbour Civic Centre. Fri., 2nd Sept. and Sat. 3rd, 9.00 a.m. to 7.00 p.m., Sun. 4th, 9.00 a.m. to 5.00 p.m. Sec.: Mr. R. M. Smith, Coramba Rd., Coffs Harbour 2450. Phone (066) 53-8249. Meets 1st Thurs. at Cavanbah Hall, High St., Coffs Harbour.

Gloucester District O.S. SPRING SHOW. R.S.L. Hall, 32 Denison St., Gloucester. Tues., 20th Sept., 10 a.m. to 9.00 p.m. Visitors welcome. Sec.: Mr. W. N. Stanton, R.M.B. 295, Buckets Rd., Gloucester. Meets 4th Thurs. at the home of the President, Mrs. J. Hawdon, 15 Queen St., Gloucester.

Gosford and District O.S. WINTER SHOW. Imperial Centre, Mann St., Gosford. Mon., 4th July to Sat. 9th in shopping hours. **SPRING SHOW.** Imperial Centre, Mon., 12th Sept. to Sat. 17th in shopping hours. Sec.: Mr. Bob Zeller, P.O. Box 541, Gosford 2250. Phone 69-1359. Meets 4th Thurs., C.W.A. Rooms, Donnison St., Gosford.

Grafton District O.S. SPRING SHOW. Diocesan Centre, Victoria St., Grafton. Fri., 23rd Sept., Sat. 24th and Sun. 25th. Setting up Thurs. 22nd. Sec.: Mr. Noel Skennar, River Rd., Great Marlow via Grafton 2460. Phone (066) 42-4813. Meets 3rd Wed. in St. Mark's Hall, Fry St., Grafton.

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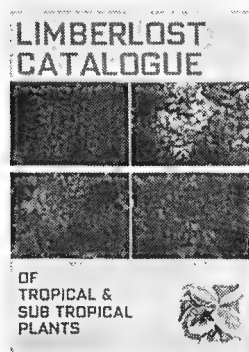
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Hastings River O.S. SPRING SHOW. C.W.A. Hall, High St., Wauchope. Fri., 23rd Sept., noon to 9.00 p.m., Sat. 24th, 9.00 a.m. to 9.00 p.m. Mid North Coast Champion Trophy. Sec.: Mr. N. Barlin, P.O. Box 193, Wauchope 2446. Phone 362. Meets 2nd Fri., Olympic Pool Meeting Room, Wauchope.

Warrawarra District O.S. WINTER SHOW. Warrawong Regional Centre, Warrawong. Thurs., 7th July to Sat. 9th in shopping hours. **SPRING SHOW.** Crown Central Shopping Centre. Wed., 31st Aug. to Sat., 3rd Sept. in shopping hours plus a Gala Charity Night on Wed., 31st Aug. Proceeds in aid of Crippled Children's Association. Entry by ticket only. Sec.: Mr. S. Astill, 14 Brookfield Ave., Warilla. Meets Whenham Oval Hall, Old Port Kembla Rd., Port Kembla.

City of Lismore O.S. SPRING EXHIBITION. Cedar Room, Lismore Town Hall. Mon., 5th Sept., 1.00 p.m. to 10 p.m., Tues. and Wed., 10.00 a.m. to 10.00 p.m., Thurs. 8th, 10.00 a.m. to 6.00 p.m. Setting up to be completed by 4.00 p.m. Sun. 4th. Sec.: Mrs. R. I. Hobbs, Wollongbar 2480. Phone 29-7315. Meets 3rd Tuesday, Red Cross Rooms, Keen St., Lismore.

Manning River O.S. ANNUAL SHOW. Presbyterian Hall, Albert St., Taree. Thurs., 15th Sept., 12.30 p.m. to 9.00 p.m., Fri. 16th, 9.00 a.m. to 9.00 p.m. Sec.: Mr. R. M. Richardson, Hillview Rd., Tinonee 2430. Meets 1st Fri. in Presbyterian Hall, Albert St., Taree.

Shoalhaven O.S. WINTER SHOW. Presbyterian Church Hall, Kinghorn St., Nowra. Tues., 7th July, 11.00 a.m. to 9.00 p.m. **SPRING SHOW.** Presbyterian Hall. Fri. 16th, noon to 9.00 p.m., Sat. 17th, 10.00 a.m. to 9.00 p.m. Sec.: Mr. A. L. Grady, 142 Penguin Head Rd., Culburra. Phone 47-1414.

Southern Riviera O.S. SPRING SHOW. Civic Centre, Ulladulla. Sat., 1st Oct., 7.00 a.m. to 9.00 p.m., Sun. 2nd, 10.00 a.m. to 4.00 p.m. Sec.: Mrs. Ina Bower, P.O. Box 8, Burrill Lake 2539. Phone 55-1070. Meets 1st Fri. at 7.30 p.m. in Kendall Cottage, Ulladulla.

Tweed District O.S. BANANA FESTIVAL SHOW. Autumn Club, Murwillumbah. Thurs. and Fri., 1st and 2nd Sept., 9.00 a.m. to 9.00 p.m., Sat. 3rd, 9.00 a.m. to 4.00 p.m. Banana Festival activities make this an interesting time to be in Murwillumbah. Sec.: Mr. Bruce Chick, Topaz Place, Murwillumbah 2484. Meets 3rd Thurs., Autumn Club, Murwillumbah.

SOUTH AUSTRALIA

Orchid Club of South Australia. WINTER SHOW. Australian Mineral Foundation Building on the night of 7th July. Exhibits must be benched by 7.45 p.m. **SPRING SHOW.** John Martin's Auditorium, North Tce. Mon., 19th Sept to Sat. 24th, 9.00 a.m. to 10.00 p.m., Sat., 8.30 a.m. to 11.30 a.m. Proceeds to aid St. John Ambulance. Hon. Sec.: Mr. D. J. Harris, 38 Princes Rd., Torrens Park 5062. Phone 71-9511. Meets 1st Thurs. in month, except that this year meetings in Aug. and Sept. will be 2nd Thurs. Meeting place is Australian Mineral Foundation Building, Conyngham St., Frewville.

North-Eastern Districts O.S. SPRING SHOW. St. Phillips Hall, Broadview. Wed., 31st Aug. to Sat., 3rd Sept.

South Australian Orchidaceous Society. WINTER SHOW. Thebarton Assembly Hall. Sat., 23rd July, noon to 9.00 p.m., Sun. 24th, 11.00 a.m. to 4.30 p.m. **SPRING SHOW.** Venue not finalised. Mon., 26th Sept to Sat., 1st Oct. For details contact Mrs. E. G. Shawyer, 60 Balfour St., Nailsworth 5083. Meets Thebarton Assembly Hall on 3rd Wed.

South Coast O.S. WINTER SHOW. Lutheran Church Hall, Brodie Rd., Christies Downs. Tues., 12th July, 7.30 p.m. (usual meeting night). Visitors welcome at meetings and shows. **SPRING SHOW.** Marion City of Shops, 297 Diagonal Rd., Oaklands Park. Theme: "Nursery Rhymes in Orchids". Set up Sat., 1st Oct. Grand opening Sun. 2nd. to 4th, 1.15 p.m. Open normal shopping hours Mon., 3rd Oct. to Sat. 8th. Plants and blooms for sale. Floral art a feature of both Shows. Sec.: Mr. H. G. Viney, 563 Brighton Rd., Brighton 5048. Meets 2nd Tues. in Lutheran Church Hall, Brodie Rd., Christies Downs.

Whyalla Orchid Club. ORCHID SHOW. Westlands Shopping Mall, Whyalla. Thurs., 29th Sept. to Sat., 1st Oct. in shopping hours. For information on this show and society contact the secretary, Mrs. W. Hayes, 158 Cartledge Ave., Whyalla Stuart 5608.

TASMANIA

Tasmanian Orchid Society. SPRING SHOW. Motors Showroom, 179 Macquarie St., Hobart. Fri., 7th Oct., 1.00 to 9.00 p.m., Sat. 8th, 10.00 a.m. to 10.00 p.m., Sun. 9th, 10.00 a.m. to 6.00 p.m. Sec.: Mr. J. F. Smith, 11 Warren Court, Howrah 7018. Phone 44-1555. Meets 4th Mon., R.S.L. Club Rooms, Victoria St., Hobart.

Devonport O.S. SPRING SHOW. Devonport Town Hall. Fri., 30th Sept., 1.00 to 9.00 p.m., Sat., 1st Oct., 10.00 a.m. to 8.00 p.m., Sun., 2nd Oct., 10.00 a.m. to 5.00 p.m. New secretary is Mr. Warren Richards of Turners Beach Rd., Ulverstone. Correspondence to be addressed to P.O. Box 805, Devonport 7310. The society meets 3rd Wed. (except January) at Don Matriculation College, Watkinson St., Devonport.

Launceston O.S. SPRING SHOW. Masonic Hall, Brisbane St., Launceston. Fri., 7th Oct., 2.00 p.m. to 9.00 p.m. with official opening 3.00 p.m., Sat. 8th, 10.00 a.m. to 9.00 p.m., Sun. 9th, 10.00 a.m. to 5.00 p.m. Sec.: Mrs. M. E. Ferrall, 4 Luxmore Place, Launceston 7250 Meets 3rd Tues. at Margaret McIntyre House, Park St.

Orchid Society of North-West Tasmania. SPRING SHOW. Venue not finalised at going to press. Dates will be Fri., 14th Oct. to Sun. 16th inclusive. For details contact secretary Mr. John Hayes, Clarks Plains Rd., Kindred 7310. Phone 28-2177. Meets 1st Wed., Methodist Hall, Ladbroke St., Burnie.

QUEENSLAND

Queensland Orchid Society. SPRING SHOW. Venue: Park Royal Motel, Alice St., Brisbane. Fri., 30th Sept., Sat., 1st Oct., Sun., 2nd Oct. Setting up from noon Thurs., 29th Sept. Sec.: Mr. Rod Mackinney, Box 2002 G.P.O., Brisbane 4001. Meets 2nd Mon. at Metropolitan Senior Citizens' Centre, McLachlan St., Valley.

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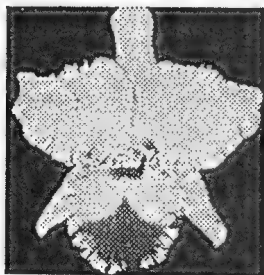
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Darling Downs Orchid Association. SPRING SHOW. Pigotts Emporium, Ruthven St., Toowoomba. Mon., 19th Sept. to Sat., 24th Sept. during shopping hours. Sec.: Mrs. S. Stone. Phone 32-6513. Meets at Scout's Hall, Ruthven St., Toowoomba, 3rd Thurs. of month.

Eastern Districts O.S. SPRING SHOW. Guardian Angel's School Hall, Bay Tce., Wynnum. Sat., 10th Sept. and Sun. 11th, 9.00 a.m. to 9.00 p.m. Sec.: Mr. F. Geary, P.O. Box 60, Wynnum Central 4178. Phone 8570. Meets 4th Thurs. at Guardian Angel's Hall.

Emerald Orchid and Foliage Society. SPRING SHOW. 17th Sept. For details contact the secretary, c/- P.O. Box 21, Emerald, Queensland 4720. Emerald is inland from Rockhampton.

Gold Coast O.S. SPRING SHOW. Southport Show Grounds in conjunction with Agricultural Society Show. Contact secretary Mr. Neil Wilesmith, P.O. Box 323, Burleigh Heads 4220. Phone 35-5335.

Ipswich O.S. SPRING SHOW. Merrill's Motors, Brisbane St., Ipswich. Sat. 3rd and Sun., 4th Sept. 9.00 a.m. to 5.00 p.m. Sec.: Mrs. Gwen Stumer, Mt. Crosby. Phone 201-0126. Meets 1st Wed., Adult Education Centre, Brisbane St., Ipswich.

Maryborough District O.S. SPRING SHOW. St. Paul's Memorial Hall, Adelaide St., Fri., 16th Sept. and Sat. 17th, 8.00 a.m. to 9.00 p.m. Sec.: Mrs. J. Gilmer, P.O. Box 389, Maryborough 4650. Meets 2nd Tues., Adult Education Rooms, Sussex St.

Mareeba Orchid and Pot Plant Society. The annual show is held about the middle of April each year and is well worth a visit. Sec.: Mrs. P. Keegan, P.O. Box 753, Mareeba 4880. Meets Presbyterian Hall on 2nd Tues.

Orchid Species Society. FIRST SPRING SHOW. New Botanical Garden's Function Room, Mt. Cootha. Meets 3rd Mon., Bread House, Wickham Tce. Sec.: Mrs. H. Young, 18 Bella Vista Tce., Paddington 4064. Phone 36-1328.

John Oxley District O.S. WINTER SHOW. Presbyterian Hall, Oxley Rd., Sherwood. Fri., 29th July, 9.00 a.m. to 9.00 p.m., Sat. 30th, 9.00 a.m. to 8.00 p.m. Featuring a great range of winter flowers. Sec.: Mrs. J. Imray, 26 Lance St., Corinda 4075. Phone 379-6733. Meets 2nd Wed. at hall above.

Maryborough District O.S. SPRING SHOW. St. Paul's Memorial Hall, Adelaide St., Fri., 16th Sept. and Sat. 17th, 8.00 a.m. to 9 p.m. Meets 2nd Tues., Adult Education Rooms, Sussex St. Sec.: Mrs. J. Gilmer, P.O. Box 389, Maryborough 4650.

North Brisbane O.S. SPRING SHOW. Toombul Shoppingtown, Sandgate Rd., Toombul. Thurs. 1st to Sat., 3rd Sept. in shopping hours. Free. A wonderful spectacular. Sec.: Mr. T. Butler, 233 Thistle St., Gordon Park 4031. Phone 57-2858. Meets 4th Thurs. (except December) at Church of England Hall, Froude St., Banyo.

Redcliffe and Districts O.S. SPRING SHOW. R.S.L. Hall, Redcliffe. Fri., 9th Sept. and Sat. 10th, 9.00 a.m. to 9.00 p.m., Sun. 11th, 9.00 a.m. to 5.00 p.m. Correspondence to: The Secretary, P.O. Box 51, Margate Beach 4019. Meets 2nd Wed. at C.W.A. Hall, cnr. Georgina and Victoria Sts., Woody Point.

Rockhampton O.S. SPRING SHOW. Held 8th to 10th Sept. as part of Capricana Week Festivities. This is an exciting time for visitors to holiday in Rockhampton. Contact secretary Mr. Terry Dean at 270 Clanfield St., North Rockhampton 4701 for details. Phone 28-2278.

Toowoomba Orchid Society. ANNUAL SPRING SHOW. Myer Roof-Top Car Park, held during the Carnival of Flowers from Sat., 17th Sept. to Sat. 24th. This is an exciting week in which to visit Toowoomba. Show open 9.00 a.m. to 10.00 p.m. daily. Meets 4th Fri. evening of month at St. James' Parish Hall, Russel St. Sec.: Miss E. Miles, 6 Somme St., Toowoomba. Phone 32-7154.

Wynnum-Manly District Orchid Society. SPRING SHOW. For details contact secretary Mrs. R. Salisbury, 5 Britannia Pde., Manly 4179. Meets 3rd Wed. in Assembly Hall, Moreton Bay College, Bay Tce., Wynnum Central.

Townsville Orchid Society. SPRING SHOW. Probable venue will be St. Matthew's Hall. Dates are 4th, 5th and 6th Aug. (Thurs. to Sat.). For details contact secretary Mrs. M. King, P.O. Box 83, Townsville 4810.

VICTORIA

Victorian Orchid Club. WINTER SHOW. Doncaster Shopping Town. Mon. 25th to Fri., 29th July during shopping hours. Special awards for theme "Queen's Jubilee". SPRING SHOW. Details not to hand at time of going to press. Contact secretary M. J. W. Skews, 6 Parkdale Ave., North Eltham 3095. Phone 439-1736. Meets 3rd Mon. at St. John's Church of England Hall, Toorak Rd., Toorak.

Melbourne Eastern O.S. WINTER SHOW. St. John's Hall, Camberwell Junction. Mon., 27th June on usual meeting night. SPRING SHOW. For details contact secretary Mr. A. Wilson, 1 Arthur St., Murrumbeena 3163. Phone 569-7689. Meets last Monday in St. John's Hall, Camberwell Junction.

Warrigal (Heidelberg) Orchid Society. For show details contact assistant secretary Mrs. M. Murray, 60 McArthur Rd., East Ivanhoe. Phone 49-3408. Meets 1st Wed. at Heidelberg Bowling Club.

Mornington Peninsula O.S. For show details contact secretary Mrs. J. S. Brighton, "Hamersley", Canadian Bay Rd., Mt. Eliza 3930. Phone 787-1347. Meets 4th Fri., Masonic Hall, Mornington.

NEW ZEALAND

New Zealand Orchid Society. WINTER SHOW. 7th, 8th and 9th July. SPRING SHOW. 22nd, 23rd and 24th Sept. Both Shows will be held in the Mt. Albert War Memorial Hall, New North Rd., Mt. Albert. Sec.: Mr. C. H. Brindle, 24 McIntyre Rd., Mangere Bridge, Auckland.

Other New Zealand Orchid Societies. There are many fine orchid societies throughout New Zealand. Most of these are members of the New Zealand Orchid Council. New Zealanders requiring the address of their nearest society, and visitors wishing to call at N.Z. meetings or shows should write to the Secretary of the Council Mrs. R. Wray, 69 Devon St. East, New Plymouth. The Council's publication **Orchids in New Zealand** is recommended. Subscription: N.Z. \$4.80, Australia \$NZ5.80.

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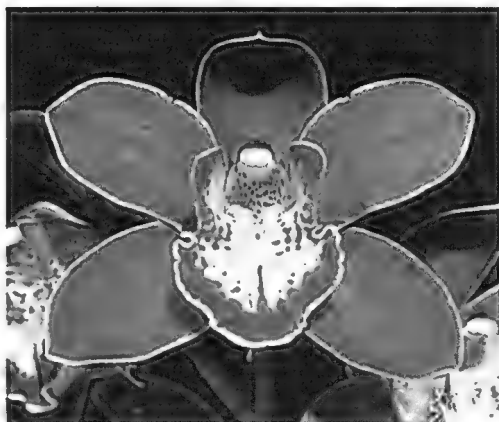
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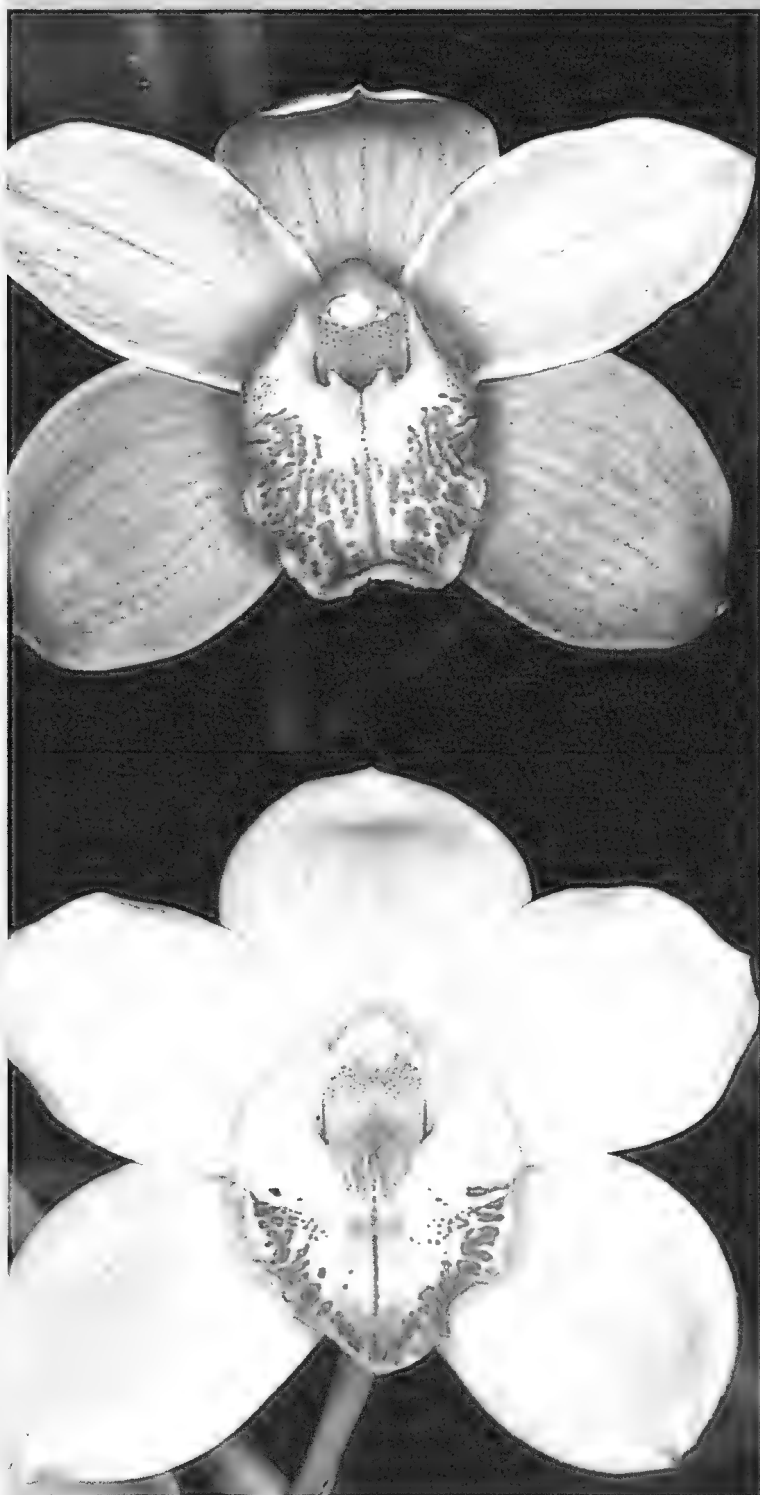
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Illustrated (left):
23 ft. x 63 ft. glasshouse

Standard Spans: 16 ft. and 23 ft.

Standard Module:

15 ft. 9 in. (4.8 metres).

Wall Height: 7 ft. 0 in.

Roof Slope: 20 degrees.

Ventilation: Mechanically - operated, full length opening ridge. Louvres in side walls optional.

Material: Hot dip galvanised frame. Galvabond Purlins and Glazing Bars. 3 mm Horticultural Glass.

Options: Louvres, bolted foundation, two doors, hail guards, benches.

Special Features: No internal obstructions — portal frame design.

DOMESTIC and PROPAGATION

Illustrated (right):
8 ft. x 15 ft. 9 in. glasshouse

Standard Width: 8 ft.

Standard Modules:

7 ft. 10½ in. (2.4 metres)

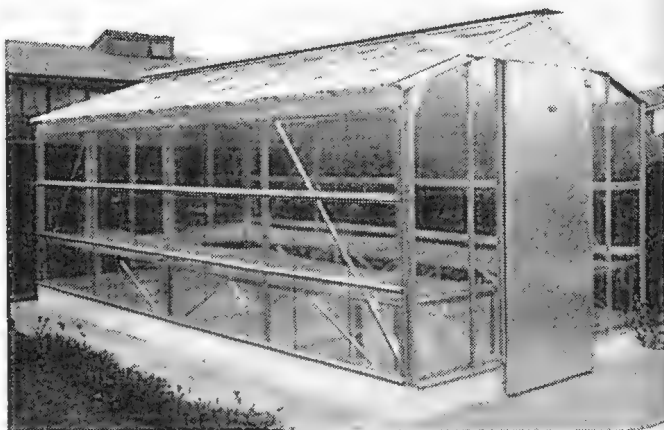
Wall Height: 5 ft. 9 in.

Roof Slope: 20 degrees.

Ventilation: Full length opening ridge. Sliding glass in side walls.

Material: Galvabond Steel. 3 mm Horticultural Glass. No costly foundations or brickwork, no internal obstructions.

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16 ft. Span ☐ Length Required.....

23 ft. Span ☐ Length Required.....

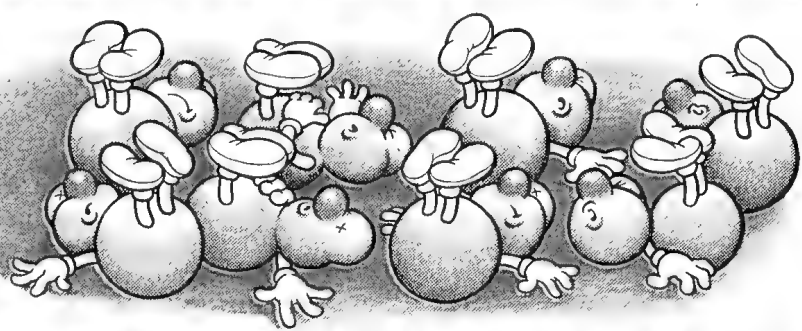
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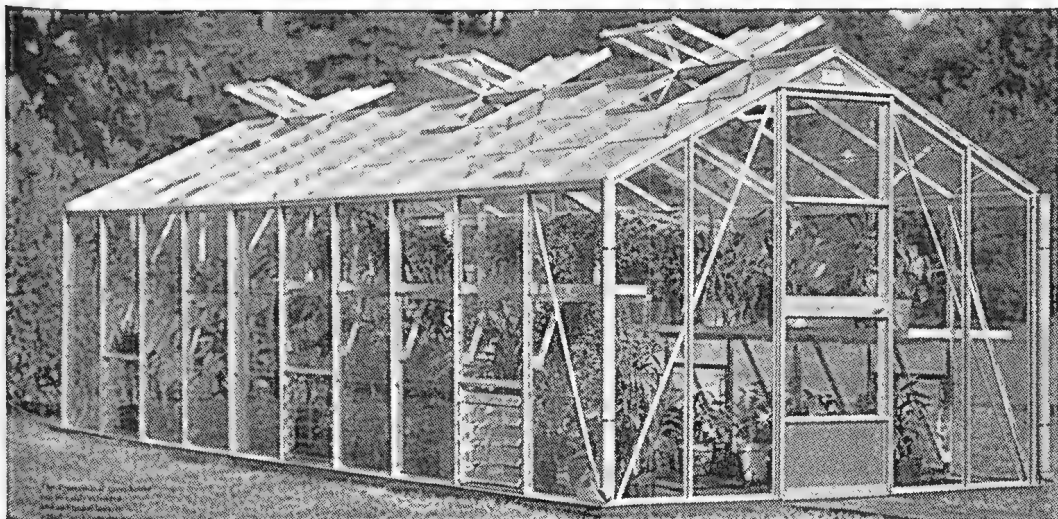
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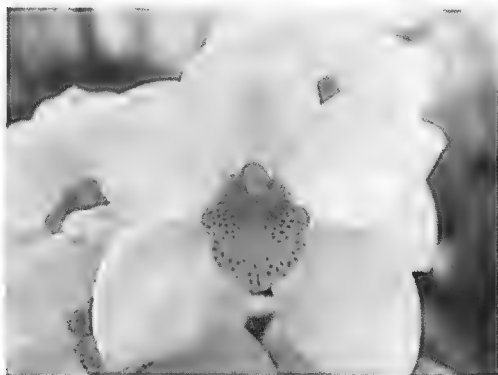
WHERE PARENTAGE COUNTS

If you have been buying seedlings from our mailing list then you may not have seen some of our parents.



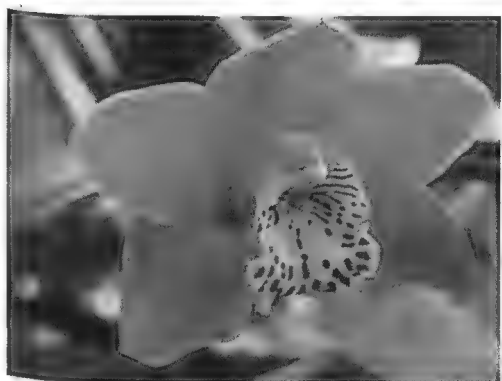
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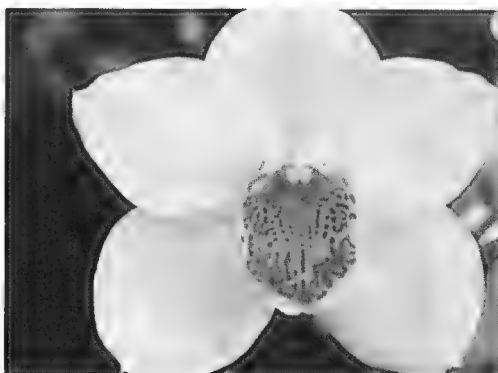
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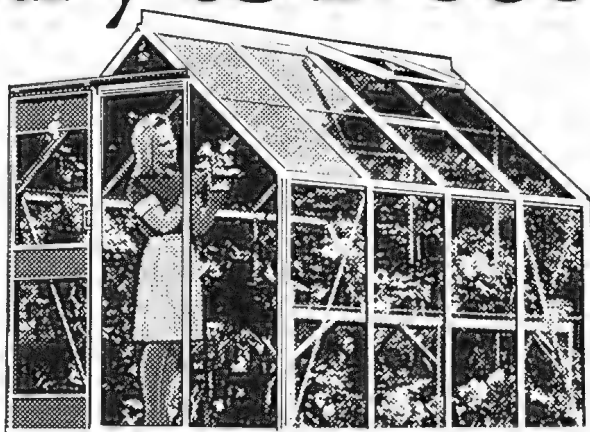
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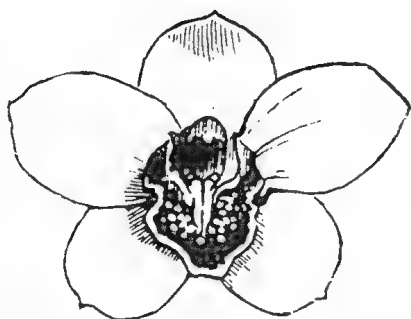
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COVER STORY

Kevin McFarlane decided to see what Thailand was really like during January, the month scheduled for the Ninth World Orchid Conference. Accordingly he beat the Conference gun by twelve months and dashed up to Bangkok this last January. We owe him thanks for his beautiful vanda pictures and his description of the things he saw. This issue the accent is on Thailand and the Vanda Alliance, with much of interest about the background and culture of both. Culture is used in its two meanings.

Bangkok in January

KEVIN McFARLANE

A large contingent of Orchid Lovers from North Queensland, together with many growers and interested people from all over Australia, are planning to visit Bangkok in Thailand for the 9th World Orchid Conference in January, 1978. From arrangements already made this could well be the greatest number of registrants to leave our shores for an overseas World Orchid Conference.

Many people have been asking, "Just what is Bangkok like in January?" Well, to get a first-hand, bird's eye view, three Cairns orchid growers, Hugh Fisher, Dave Hampton and Kevin McFarlane left Cairns on January 12 of this year for an eighteen-day stay in Bangkok. The time of departure was important as they wanted to be in Thailand at approximately the same time as the Conference next year. On return they were full of praise of what they had seen. What they loved most was the happy Thai people. Even when they miss one another by an inch or two in their cars on the overcrowded roads and narrow side streets, you don't hear loud blasts of horns or people shouting at one another. They are a very placid people and just accept the situation for what it is.

The country was beautiful and green, and the Rose Garden, where the Show is to be held, was a picture. We found the weather warm, and although coming from the warmth of Cairns where we should have been used to it, we were grateful for the comfort of air conditioning. They do say that on occasions they get a cool change so it is advisable to take a jumper.

The shopping is great with several large Emporiums close to the hotels plus miles of sidewalk shopping, so I would advise the womenfolk to take the biggest suitcase they can find and to take the least clothes they can manage with from Australia. I am sure the suitcase will be filled to capacity with someone jumping on top to get the lid fastened for their return trip home.

There are many fine restaurants catering for all tastes — some we tried were English, French, Thai, Mongolian, Chinese, Japanese and Indian. All were delicious. Take my advice — try everything, even if you have to close your eyes. That is what Dave Hamp-

ton did and said it tasted beautiful. Take about service — you don't know the meaning of the word until you visit Thailand. It is very easy to get spoilt.

The majority of orchids in Bangkok are of course the vandaceous and dendrobium genera. We visited most of the leading nurseries and it was a real eye-opener. Some grew acres of dendrobiums only, for the cut-flower trade, whilst others grew some each.

The price asked for vandas, though fairly reasonable, was not cheap. Anything with a bit of shape will usually demand about 2,000 dollars and upwards, and don't be surprised if you are asked 150 dollars for a selected plant. By far the best cross we saw was Laurel Yap x V. Suntan. We saw two very fine clones of this cross. The blooms on one were large, beautifully shaped and a royal blue colour, whilst the other was a strawberry red with heavy spotting. The price asked for the owner of these two plants was 2,000 dollars for the first and 2,500 dollars for the second (for which he had already knocked back an offer for 2,000 dollars) — a little steep for our pockets. They were by far the best two vandas I have ever seen but being out of our price range we had to be satisfied with an unflowered seedling of the same cross at 40 dollars each. Perhaps the best buy was the ascocendas. With today's world trend favouring the larger vandas, the delightful little ascos can be obtained at a price suitable most pockets.

T. Orchids had a small but colourful display and during our visit we were able to watch the cut flowers being packed for the overseas market.

Phairot Lenavat Orchids had a most spectacular display of vandas in bloom. There must have been at least two to three thousand plants of vandas and ascocendas in full bloom. It was really a beautiful sight. Most were of a very high quality so there were many "ohs" and "ahs" as we discovered new "genotypes" along the rows of plants.

Some of the nurseries are not easy to find even for a taxi driver, but the Thai people are so kind and generous — just a phone call from a genuine orchid grower and you are on your way.

Please turn to page 123



The dazzling array and the glittering gem



▲ The intense colour and mass impact of this display in Phairot Lenavat's nursery is truly breath-taking. This group demonstrates the highly sophisticated hybridising standard achieved by Thailand growers. Price tags as high as \$2,500 were on some of these plants. Unflowered seedlings and flasks were relatively cheap.

◀ *Vanda* Laurel Yap x *V. Suntan*. The first flower, newly open, signals the terrific potential of this clone. Kevin McFarlane thinks it is better than average among the best array in Bangkok.

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Bangkok in January — from page 122.
nurseries will send someone to your hotel to pick you up, so if there is anyone that you wish to visit, try to get their address and phone number before your departure, and if they are too busy during the Conference to pick you up have your taxi driver call them and they will explain how to get there.

A visit to the Weekend Orchid and Garden Market is a rare experience. Right along a canal you will see orchids, plus other plants and all gardening requisites for sale. At times you can pick up an orchid very cheap but make sure the plant is healthy or you may have problems meeting Australian quarantine requirements. There are usually lots of species for sale too — straight from the bush — very, very cheap. Right across the road is the General Market where you can buy just about anything from a parrot to a monkey and see cock-fighting in between. Spurs are not used on these birds so they don't hurt each other so much. These markets are a must if you haven't been to Thailand before. There is something beautiful and mysterious about the people of the East.

26 Goodwin St., Edge Hill, Cairns 4870

EDITOR'S CHANGE OF ADDRESS

Please note that all correspondence of an editorial nature and all society bulletins should be sent directly to the editor:

Mr. Ron Kerr
260 Geoffrey Road,
CHITTAWAY POINT,
N.S.W. 2259.

Chittaway Point is near Wyong just off the road to The Entrance and orchid visitors are welcome to call in at any time. Next time you come up or down the coast remember: The Entrance turn-off, near Wyong.

Incidentally the editor would like to hear from anyone with the two copies of the Sanders 1945-60 Addendums for sale.

MELVILLE ORCHID SOCIETY

The Melville District Orchid Society (W.A.) has now been in existence just over two years and in that short time the membership has grown to over 100. Melville is situated in the Perth metropolitan area and is within 13 kilometres of the Capital City. At the last Annual Meeting the Foundation Office Bearers were re-elected for a further term, Jack Coleman as President, Reg Lander as Secretary, and Albert Bartlett as Treasurer.

Meetings are held on the second Thursday of every month at the Roy Edinger Community Centre, Palmyra. Members are working hard for a successful Spring Show on 3rd and 4th September, and in preparing exhibits for the Fifth Australian Orchid Conference.

AUSTRALIAN ORCHID COUNCIL

Annual General Meeting

The seventeenth Annual General Meeting of the Australian Orchid Council takes place at the Sheraton-Perth Hotel on Wednesday, 14th September during the Fifth Australian Orchid Conference.

A heavy agenda includes annual reports from various officers, judging matters and Awards. A decision will be made on the venue for the Seventh Australian Orchid Conference.

A proposed new Constitution for the Council is bound to occupy much of the meeting's time. The President's Report indicates a very active year, and all executive officers have really worked hard.

The Treasurer's Report shows that there has been a small surplus for the year, and that the Council has been run in a remarkably economical fashion.

During the year 33 Awards were ratified. The Registrar-General has made several interesting suggestions regarding National Awards, including Regional Judging, and no doubt the latter will receive lengthy consideration at the meeting.

The Programme Director reports that the three new programmes have been produced. The Programme Librarian reports that 37 Societies requested and received 146 programmes.

A report on the deliberations of the Council will be published in the December issue, together with a full coverage of the National Awards.

NEW DENDROBIUM CROSSES

Credit to Graham Ralston

The hybridiser of the softcane dendrobium hybrids so highly praised by Mr. Harry Spence in his article published in the last issue has been identified.

He is Mr. Graham Ralston of North Turrumurra, Sydney. Mr. Ralston has been a consistent hybridiser for many years, first with cymbidiums, and now with softcanes.

One of the crosses is from the parents *D. Felicity* and *D. Winifred Fortescue*. The cross is widely distributed and has become known as *Dendrobium "Felicity Fortescue"*, the double quotes indicating that it is as yet unregistered.

Mr. Ralston's other very successful cross has the parents *D. Winifred Fortescue* and *D. Adele*, not yet registered but known, at least in the Sydney area, as *D. "Adele Fortescue"*.

Many of the progeny of these two crosses show a breakaway from the dark "eye" so characteristic of the vast majority of softcane flowers.

Hundreds of clones of these crosses were distributed through the Wondabah Nursery of Sydney.

Mr. Ralston is to be congratulated on his skill in producing softcanes which are at least the equal of the best from the famous Yamamoto Nursery of Japan.

BOOLAROO O.S. NEW MEETING NIGHT

This Society now meets on the first Wednesday in each month, instead of the third Wednesday. The venue is the same, namely, Masonic Hall, Lakeview Street, Speers Point. Visitors and new members are very welcome.

FIFTH AUSTRALIAN ORCHID CONFERENCE SPECIAL

ALL BOOM IN THE WEST

The Orchid Society of West Australia started in a tea shop. There were no storms in the tea cups of the Lattice Tea Rooms whenever a few orchid growers gathered there to talk orchids during the war years. The group officially formed a society shortly after the war's end.

Old Westralian growers will remember nostalgically the names of those associated with the early days. Early President Mr. Russell Wright, for instance, and Mr. H. W. Mercer who was credited with having the best collection in the State during the late forties and early fifties.

Other early growers were Messrs. J. Hammond, S. Hall, A. Ewans, and G. Arndt. Mr. J. S. Bridgeman was the first publicity officer.

Mr. Ewans corresponded with Mr. T. H. James, a founder and first secretary of the O.S. of N.S.W., and gained much knowledge on culture which he faithfully passed on to other members. Several members of the O.S. of N.S.W. visited Perth in those early years and gave demonstrations and talks on culture.

By 1960 W.A. was ready for a major show and Mr. Frank Slattery of Sydney visited there as judge. He was able to pass on some of his vast knowledge to the newly formed judging panel. Since then members of the panel have been consistent visitors to Australian and World Conferences and thus judging is now in line with international standards.

During the sixties terrific work was carried out in every office by Mr. Harold Hill, who tragically died soon after retirement. Another stalwart is Mr. Herb Foote, now in retirement at his bushland property "Foothills", and founder of the recently incorporated Native Study and Conservation Group Inc.

In the past three years other new societies have emerged. There is one at Bunbury about 150 km south of Perth, and suburban areas are covered by the Melville Orchid Society, the Northern District Orchid Society, and the Wanneroo Orchid Society. In addition the O.S. of W.A. is sponsoring orchid groups in other areas and leading them to full society status.

Organisation of the Conference has been carried out by a Sub-Committee headed by Mr. John Foley. Other prominent members

of the O.S. of W.A. are President Mr. Rex Brown, treasurer Mrs. K. Bayliss, Mr. Rex, Mr. George Marshall, Mr. A. Johnson, Mr. Bill Janey and well known paphiopedilum breeder Mr. Harry Lodge.

CONFERENCE BENEFITS RADIATE TO EVERYONE

Participants at the Conference will assuredly have a most interesting and enjoyable experience. However, the benefits radiate back to every grower because the wealth of experience packed into the Conference papers published in part or in full in society bulletins or passed on verbally by those who were there.

Some of the Conference topics are at the world forefront of orchid culture. For instance Mr. Merv Dunn of Adelaide is to talk on *Induced Tetraploidy in Cymbidiums* a subject on which he probably has more practical experience than anyone in the world. Dr. C. Withner, a world famous biologist, is to provide a paper on *Photosynthetic patterns in Orchids*, a subject with considerable influence on culture.

In addition there will be cultural papers by such experienced growers as Mr. Barry Page on *Vandaceous Orchids*, Mr. Harry Spencer on *Softcane Dendrobiums*, Mr. Gerald McCraith on *Odontoglossums*, and Mrs. Ed Ratcliffe will detail *Progress in Paphiopedilums*. Other speakers will be Prof. Edmund A. Schelpe on *Orchids in South Africa* and Mr. Andrew Brown on *West Australian Native Orchids*. Also Prof. Raper Sagrik on *Orchid growing in Thailand*.

Nearly 300 registrants will be journeying to the Sheraton-Perth Hotel, including some from New Zealand and other overseas countries. There will be eleven interstate and overseas display groups, plus West Australia's best Spring Orchid Show ever, covering an area of 2,500 square feet.

The Orchid Society of West Australia is now a very mature society, with five affiliates and terrific potential ahead.

WANNEROO ORCHID SOCIETY OF W.A.

This Society meets in the Lesser Hall of the Wanneroo Civic Centre on the third Thursday of each month. Hon. Secretary is Mr. E. R. Kennedy. 447 Main Street, Balcatta. Phone 49-2545.

A new role for *Dendrobium* *luteocilium* Rupp



L. J. LAWLER

To the lover of orchids much of their charm comes from their seemingly endless roles in nature. Recently the writer became aware of some interesting relationships between orchids and birds.

In September, 1976, while accompanying the Australian Orchid Foundation Iron Range Expedition (see *A.O.R.* March, 1977), the writer visited Portland Roads, where Nita and Ross Pope drew his attention to a nest of the mangrove warbler, *Gerygone levigaster* Gould. The parents had successfully raised a family in the nest, which was of typical construction. The only unusual feature was the site of the nest, which was at the tip of a 90 cm long cane of *Dendrobium luteocilium* Rupp. When last seen in late September both family and orchid were thriving.

Other reports of birds and orchids are set out below. Perhaps the most interesting report is that of a dendrobe named after the bird that uses it! Beccari (1876-77) in a report of an excursion to Mount Arfak in Irian Barat describes the construction of the bower of the gardener-bird *Amblyornis inornata* Schlegel. This large bower was made solely from the stems of a dendrobe which was named *Dendrobium amblyornidis* by Reichenbach fils (1878). Beccari gives a full account with a fine sketch of the handsome bower and the accompanying garden. Substantial accounts in English of his paper are given by Reichenbach fils (with a reproduction of the sketches), Rolfe (1893) and Hawkes (1952). Richter (1965) is of the opinion that the use by man of *Dendrobium* spp. in South-east Asia for weaving and basketry may have been suggested by the activity of this bird.

Our own native species are not left out in these reports. Jones and Gray (1976) observed three sprays of flowers from *Dendrobium carriei* Rupp. et C. T. White in the

play bower of the golden bower bird *Prionodura newtoniana* De Vis in rain forest at Mount Lewis, North Queensland.

In a very interesting paper in the *A.O.R.*, Gilbert provides the following information. The satin bower bird *Ptilonorhynchus violaceus* Viellot has been observed to include in its display creamy-yellow flowers of *Dendrobium speciosum* Sm. and yellow-green flowers of *D. tetragonum* A. Cunn. The yellow-throated scrub wren *Sericornis citreogularis* Gould uses live rock plants to decorate its nest (Frith, 1976). Gilbert has observed the following orchids in the nests: *Bulbophyllum crassulifolium* (A. Cunn.) Rupp., *B. exiguum* F. Muell., *Dendrobium tetragonum* A. Cunn., *Papillilabium beckleri* (F. Muell. ex Benth.) Dockr., *Plectorrhiza tridentata* (Lindl.) Dockr., *Sarcophilus hillii* (F. Muell.) F. Muell. and *S. olivaceus* Lindl.

Gilbert has also recorded the destruction of buds of *Cymbidium* spp. by the blue wren *Malurus cyanens* Latham.

These reports contribute more to our knowledge of this interesting family of plants. I would ask all readers of the *A.O.R.* to note any similar observations so that they may be recorded.

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- Dept. of Biochemistry, University of Sydney, Sydney 2006

NINTH WORLD ORCHID CONFERENCE

Flowers for Thailand

For the sake of our prestige Australia must have a worthy display at Bangkok.)

January is an excellent blooming time for the orchids of Thailand, but not so opportune for growers in Australia. This means special efforts to produce rabbits out of hats — or, more specifically blooms out of glass-houses.

A.O.C. President Mr. Syd Monkhouse and the Presidents of each State Society are well aware that special efforts must be made and the matter will be fully discussed at the Annual General Meeting of the Council.

However, ultimately it comes down to the contributions of individuals and the efforts they can make to advance or retard flowering.

Each State Society is organising special pick-up arrangements and growers are requested to kindly advise the flowers they are likely to have available.

INDEPENDENT EXHIBITION

Growers wishing to forward flowers independently should contact: The Secretary, Ninth World Orchid Conference, P.O. Box 9-22, Kasetsart University, Bangkok, Thailand.

STILL TIME TO BOOK

As at mid-August all tours had a few vacancies and there could be the odd cancellation. So there is still time for you to book. Refer to the June and March issues for details, but note that Queensland O.S. tour has been altered as information below. The summary below gives the travel agents concerned and it is suggested that you contact the one handling the desired tour immediately.

A.O.C. and O.C.S.A. Tour. Organised by Jet-Set and Travel Centre, Adelaide. Period 23 days. Cost ex Sydney \$1,184, ex Hobart \$1,350, other capitals in between these prices. Departs 9th January.

Orchid Society of N.S.W. Tour. Contact Jet-Set. From 9th January for 28 days. Cost ex Sydney \$1,469. The short tour as previously announced has lapsed.

Orchid Society of W.A. Tour. Contact V.U. (International) Pty. Ltd. Option of three tours each about 14 days. Cost from \$763 to \$856.

Victorian Orchid Club Tours. Contact A.N.Z. Bank Travel Centre. Options: 28

days \$1,678 ex Melbourne leaving 6th January; 22 days \$1,348 ex Melbourne from 6th January; 16 days \$1,057 leaving 12th January.

Tropical Queensland Orchid Council. Contact Kings Holidays, Brisbane. Period 14 days for \$1,142, leaving 13th January.

North Shore O.S. Tour. Contact Atlantic and Pacific International Travel Service, Sydney. Period 21 days for \$1,414. Departs 13th January. Includes Bali.

ALTERATION TO QUEENSLAND O.S. TOUR

This tour still leaves on the 12th January from Brisbane but the Chiang Mai side tour is now an optional extra, and the tour now includes Kuala Lumpur and Malacca as well as Singapore, Bangkok and Hong Kong. Many interesting half and one-day tours are included at points of call. Return from Hong Kong is direct to Brisbane on 31st January and not via Sydney as previously announced.

The alteration decreases the cost of the main tour to \$1,146, ex Brisbane, plus \$90 for the Chiang Mai option. For full details contact Kings Holidays in your capital city.

Prices are for twin accommodation and there is a surcharge for a single room.

BIG MONEY IN FLOWER POWER

Lid you know that floraculture in the Redland area near Brisbane is a two million dollar industry? This was pointed out at a recent meeting of the Rockhampton Orchid Society by Mr. Don Shepherd, a plant expert with the Department of Primary Industries. Flower growing at Redland is as scientific as anywhere in the world. An interesting sidelight to Mr. Shepherd's talk was the revelation that the life of cut orchid flowers can be extended by putting the spikes in a mixture of half water and half lemonade. Sounds logical after all that's a mixture of sugar and carbon dioxide, two essentials to plant growth.

The Rockhampton Orchid Society meets on the fourth Tuesday of each month in the North Rockhampton Methodist Hall, Musgrave Street, North Rockhampton. Phone Secretary, Mr. Terry Deane at 28 2278.

CONTROL OF PYTHIUM ROT

In a recent lecture to the Toowoomba Orchid Society Mr. Bert Schwartz of Lugarno Orchids, Sydney, mentioned that many orchids have been lost in the Sydney area due to *Pythium* rot. The Sydney water supply has been implicated in the spread of the rot. To control the rot, addition of calcium nitrate to all water used for watering and fertilizing has been found effective. Calcium nitrate is made up in a 14 per cent solution and added to the water at the rate of one gram to one gallon.

PREVIEW TRAVELOGUE TO NINTH W.O.C.

The Land of Smiles

FRED KIRBY

THAILAND . . . a land of contrasts, a land of exotic beauty. There have been many attempts to define the character and color of this oriental country. Some have called it the "Eden of the Orient", some think it more a "Venice of the East", or the one I find more appropriate, "The Land of Smiles", yet all must fail because of the rich variety of this unique land.

The history of Siam extends back more than a thousand years with a character and tradition that have survived relatively intact due to the country's maintenance of its independence from colonial rule. Combined with a fairly stable political environment, the natural fertility of the soil, the country presents, for the most part, a land of plenty with but few isolated areas of real poverty such as you find in many oriental countries.

Thailand is situated between 5 and 21 degrees North Latitude in Southeast Asia and encompasses approximately 200,000 square miles, ranging from the mountains in the north through the central plains containing the rich rice fields, then to the southern peninsula with tapioca and sugar cane fields leading to the rubber plantations.

The capital city Bangkok, is located just over 600 miles from the Equator and by definition is in the tropics. Temperatures during the dry season may soar to the 90's and occasionally reach 100. In the north you will find hail and frost during the cooler months. In respect to temperature you will find Thailand, while located in the tropics, is actually more temperate than some places of greater latitude. What affects most visitors and a few residents is the high relative humidity that averages 80 per cent during the rainy season with many days of 90 to 95 per cent. The ideal months for travel to Thailand are of course December and January when the relative humidity lowers to around 65 per cent and the night temperatures are sometimes spiced with a slight chill.

Rich in orchid species, Thailand counts more than 900 identified types. The humid tropical jungles of the lower peninsula, the semi-tropical conditions of the central portion of the country combined with the cooler

mountainous elevations of the north offer a varied environment where orchids familiar to most growers can be found. *Calanthe vestita*, *C. rubens* and *C. cardioglossa*; *Coelogyne cumingii*, *C. virescens*, or as some call it, *parishii* are native to Thailand, as are several forms of cymbidium such as *C. lowianum*, *C. insigne*, *C. tracyanum*, *C. simulans*, *C. finlaysonianum* and the delightfully fragrant *C. siamense*. There are nearly 140 different dendrobium species growing throughout Thailand including the ever popular *D. aggregatum*, *D. chrysotoxum*, *D. densiflorum*, *D. farmeri* and the highly scented dark-lavender flowered *D. parishii*. Few have seen the *Den. formosum* var. *gigantea* with its white flowers measuring up to four inches across and delicately perfumed, or *Den. aphrodite* in pure white with dark contrasting purple maroon blotches at the base of the lip.

Doritis, parent to the growing family of *Doritaenopsis* hybrids is here with its small light lavender to dark purple flowers contrasted against the genus *Grammatophyllum speciosum* which has the distinction of being not only the largest member of its group, but perhaps the largest plant of the entire orchid family.

Renanthera and *Phalaenopsis* add their bit to the orchids of Thailand with several worthy species as do the *Spathoglottis plicata* and *S. lobbii* with their adaptability to garden culture. For show and fragrance add the ever popular *Rhynchostylis gigantea* regal in white with amethyst-purple spotting, the alba form or the dark blood reds. Add the Spring flowering *Rhynchostylis retusa* and the April to July flowering *Rhynchostylis coelestis* and you begin to understand why this genus is so popular. Then there are *Paphiopedilum bellatulum*, *P. concolor*, *P. niveum*, *P. godefroyae*, *P. parishii*, *P. exul*, *P. villosum*, *P. callosum*, *P. barbatum* and *P. sukhakulii*. And we certainly don't want to forget the genus *Vanda* and the genus *Ascocentrum*. Few are the collections of orchids that don't contain the Queen of Vandas, *V. coerulea*, or the well-known vanda and ascocenda hybrids.

The main interest of orchid growers in

Thailand has been directed with a zeal and common love to the genera *Vanda* and *Ascocenda*. The results have been an ever increasing list of new and improved hybrid forms. Colours are reaching intense color levels of dark blues, purplish-near-blacks, heady burgundies, vibrant reds and now we're beginning to see more and more lovely strong yellows. Flower sizes have increased. *Vanda* flowers measuring four inches are common with some measuring five inches. *Ascocenda* flowers are also growing in size and stature. The recently awarded clone of *Ascocenda* Queen Florist 'Boonchoo', FCC/AOS produces flowers measuring four inches across and a flower spike exceeding two feet!

Those attending the next World Orchid Conference in Bangkok, Thailand, will have the opportunity to see and enjoy the fruits of this labor of love.

Language is no real problem when visiting Thailand. The Thai written characters and the sounds of spoken Thai will certainly be strange to your eyes and ears. You will discover that most shops use both English and Thai as do the street signs. Commercial shops, hotels, restaurants and other locations frequented by tourists are staffed with personnel who speak good English. Even when you're away from your hotel and find yourself trying unsuccessfully to communicate to a non-English speaking person, there will always be someone who'll come to your rescue. The Thai's are very friendly and will go out of their way to speak with you and offer any assistance you require.

Of course knowing just a few words of your host's language makes any visit to a new country just that much more enjoyable. It identifies you as a person who is really interested in the country you're visiting. There are two words every visitor to Thailand should know. The first is, "snuk", it means "fun", "entertainment" or "amusement". Your Thai hosts are past masters of "snuk" and even we westerners, after a time become apprentices of "snuk". But I doubt that any westerner can become as relaxed and ready to laugh as a Thai. "Mai Pen Rai", they'll say when something unpleasant occurs; "never mind". And it really helps to soothe the troubled waters and soon they are laughing again at the great "snuk" they're having and so are you.

The capital city, Bangkok is a medley of past and present. Narrow winding roads,

hardly wide enough for a single auto, lead into wide modern boulevards filled with an endless jam of cars and buses and trucks and motorcycles and bicycles and the people of the City. Tiny shops, cramped with the necessities of daily life co-exist side by side with the colorful gift shops offering the many handmade articles of Thailand; silks, silver bowls and trays with hand worked designs, carvings of teak wood and ivory, jewellery fashioned with rubies, emeralds and sapphires from the local mines and all these are offered at real bargain prices, provided you "bargain". Bargaining for your purchases is traditional here and is expected.

You'll find taxi prices here a welcome relief. A fare of several dollars will take you across town and a tip isn't necessary or expected when you arrive. The same is true of tipping in hotels, you may if you desire but the bill will have a ten per cent "service charge" added to it for your room and food meals.

First class hotels in Bangkok offer you services of internationally accepted standards flavored with a touch of the Orient. Many have more than one restaurant serving a variety of well prepared foods. The city itself is famous for the quality and types of international eateries available and you should avail yourself of their delights. Italian pizzas, Indian curries, Japanese sushi, or Hungarian goulash are here for the tasting; you can patronise a German delicatessen or Beck's Garden, a French Cafe, an American Bar, or an English Pub. Add to these the legion of Thai and Chinese establishments that cater to almost any pocketbook and you begin to realize what an eating experience you have in store while here. You should by all means try the Thai foods you'll find offered on the hotel menus. They have been selected because of their appeal and are usually seasoned with the foreign traveller in mind. If eating something you enjoy, you'll find the Thai dishes wonderfully spicy and varied from the "sweet and sour" to the fiery hot peppery selections; all guaranteed to stimulate your taste buds and make eating a real experience. You should try the Thai Beef Salad, Beef with Oyster Sauce, Chicken with Cashew Nuts, Shrimp or Pork in Sweet and Sour sauce; add several of the hot and spicy soups like Shrimp Soup, slightly hot and tangy. And for something to really tell your friends about when you get home try the tender

young corn cooked with the meat of your choice. It's corn on the cob and you eat the whole thing, ear and all. The ear is very young and tender and especially sweet. Do try it. A word of caution. Do be careful of the very small red or green colored peppers used here to season foods. While they lend a nice dash of color, they can be very painful to the uninitiated. If you find Italian or Mexican peppers hot and unpleasant, stay well clear of these, they are hotter. And the smaller they are, the hotter they get. But for those that enjoy their foods hot and spicy, dig in and have a ball.

While Bangkok has grown modern and cosmopolitan during the last fifteen years, it still retains the charm that made it famous as the Jewel of the Orient. You can still paddle down leaf strewn canals (they call them "klongs" here), shop at neighbourhood floating markets and admire the stilted homes perched over the water. Many children still go to school using the "river bus"; bare breasted women with betel-stained teeth still bath unconcerned along the "klongs"; Buddhist monks in saffron-colored robes paddle from house to house along the canals making their daily collection of food as their predecessors did for hundreds of years.

In the heart of the city, King Rama I built in the eighteenth century was his palace and Buddhist temples. These are still standing today on the bank of the Chao Phraya River. The Grand Palace and surrounding wats (temples) form a testament to the heights of grandeur that ancient Siamese culture attained. They offer a viewing experience unique in the world! They are a must for anyone visiting Thailand and a camera enthusiast's delight.

It was here that Anna first met the King of Siam and remained to teach the children of the court. It was here that the Kings of Siam lived for over two hundred years. And it is here that the Thai people have their most sacred Buddha image, the Emerald Buddha. It is a scene of strange multi-colored buildings with gold encrusted walls and roofs resembling giant, elaborately tiered wedding cakes, with layer after layer of overlapping eaves, tiled in gleaming green and gold porcelain, reflecting the Sun's rays in a dancing glimmering show that surely held the gaze of Anna as it will hold yours and the millions of travellers who have already looked back into ancient Siam.

Each week-end, the bazaar of bazaars is held across the street from the palace grounds in a field that was once used to saddle the elephants of the King. The bazaar is called "The Sunday Market" and it is immense! It is nearly physically impossible to visit the entire market in a single week-end and it is more doubtful that you would see half the items that are offered for sale as each stall is packed with merchandise.

It is here, beginning on Friday, on the sidewalk outside the Royal Hotel, situated on the opposite side from the palace grounds, that the species collectors bring their orchid finds from the previous week for sale. By Saturday morning the remaining portions of the market are in place with the orchid sellers stretching for two city blocks lined on both sides of the street.

With so much to do and see in Bangkok many visitors spend their entire time within the city boundary. But what a shame! There are other interesting places to go and see.

Within two hours of Bangkok by air-conditioned car or bus is the seaside resort, Pattaya. For sun lovers it offers the complete package at prices that really offset the airfare. There's water skiing, para-sailing, or just good ol' plain sailing; fishing offshore or scuba diving among the coral reefs; for the golfer there are two championship courses only minutes away; one luxury hotel offers its own 16 lane nine pin bowling alley. In the evening there's dinner and dancing at any of the more than twenty hotels or the many added restaurants and clubs that line the beach. If crowds are not what you are looking for, head south by plane from Bangkok for three and a half hours to the island resort of Phuket. You'll find modern accommodations set on a tropical island and when you see the beaches you think you are there all alone. They are genuinely uncrowded.

A visit to Thailand without also spending several days in the second city, Chiang-Mai, is like lemon meringue pie without the meringue. You'll find the most agreeable climate here, some say the food here is the best, the scenery is certainly more spectacular with the surrounding mountains and the women of Chiang-Mai are storied for their beauty.

Chiang-Mai is always a few degrees cooler than Bangkok and this is especially noticeable in the early morning with a refreshing chill in the air. Life's pace is slower in Chiang-Mai,

more reserved, the hustle and bustle of urban Bangkok is gone, you can unwind, relax. Hotels are modern with accommodation to suit all tastes from the Thai decor of the Rincome Hotel to the more modern appearance of the Suriwongse, or the just completed Hotel Chiang-Mai.

You'll want to visit the various arts and crafts centres in Chiang-Mai and the surrounding villages, to view the making of the gifts you'll want to purchase to take home for yourself and friends. You'll see rows of hand-painted umbrellas drying under a warm sun, their colours leaping at you; watch as bowls and other pottery items are being formed; you see and listen to sounds of the silversmith's hammer as he fashions silver articles from old silver coins, smuggled across the border from Burma; you'll be fascinated as you watch silk being woven on old-fashioned hand looms and fall in love with the designs and colours that are locked into the fabrics desired by women around the world because of its quality and beauty. There are other craftsmen at work here and you'll want to see them all.

On a clear day there's no finer view of Chiang-Mai than from the walkway surrounding the Buddhist temple perched high on the side of Mt. Doi Sutep. From this 5,500 foot elevation you can study the temples that your tour has already visited; Wat Phra Sing, the largest and most important in the city and dating from 1345 AD, Wat Chiang Man, the oldest wat in the city, dating from 1300 AD when it was originally the residence of King Meng-Rai, the founder of the city. Your eyes will follow the streets of the city out to the rice fields surrounding it, then on to the mountains in the south that enclose the valley.

The Royal Summer Palace is located further up the mountain and the grounds are open to visitors whenever the Royal family is not in residence. Further still from the palace is the nearest hill tribe village to Chiang-Mai. The road is rough and twisting but the village is of interest. The tribe is of the Meo tribe, one of six tribes living in northern Thailand. The Meo of this village are quite used to tourists now and although basically a suspicious people, will pose for pictures — often for a small financial reward. The native dress is colourful and made from hand-woven fabrics in black trimmed with contrasting colours of red, white and yellow with hand-fashioned silver jewellery worn on

the heads, neck, arms and ankles of the women, and especially the un-married women. An interesting fact about hill tribe life, there is very little divorce here. A man "buys" his wife by making a payment to her family. Should she leave him without good cause the family must return his money, should she leave her he loses his "deposit", which is normally about \$150.00. It is also interesting to note that the male can have more than one wife. The only limiting factor is money. Without money he remains a bachelor, No Money No Honey, so they say.

There is much more to Thailand to see and do than there is time to cover in this short article. There is nothing like seeing and tasting a country in person to fully enjoy its flavours. You'll find none more different, none more pleasurable and none more ready to make your stay a truly memorable one.

I hope to meet all of you personally at the 9th World Orchid Conference in Bangkok, Thailand, January 18th to 25th. Until then SAWATDEE!

*Thai-Am Orchids, 80 Soi Chitranukul,
Sukhumvit 71, Bangkok 10, Thailand.*

Editor's Note: Thai-Am Orchids is offering a free travel handbook in colour for those planning to attend the Conference. It covers hotels, restaurants, transportation in Thailand, customs regulations, visa requirements, what to see and where to go. To obtain your copy send your cheque for \$3.00 to cover handling and air mail postal charges. There will also be available at the conference a free handout on shopping tips in Bangkok and Chiang Mai, plus other goodies.

T. ORCHIDS NEW CATALOGUE

To thumb through this catalogue is to become very much aware of the size and importance of the Thailand orchid industry. Behind this industry there is a grassroot feeling among the people of that country for the beauty of orchids and even in the smallest homes a few orchid pots may be seen hanging from window awnings or rafters.

Growers interested in vandaceous dendrobium orchids will need this catalogue. Importation of mature plants is a major hazard for Australians due to our correct strict quarantine regulations. However, flasks are easier to import and T. Orchids catalogue extremely well for the flask buyer.

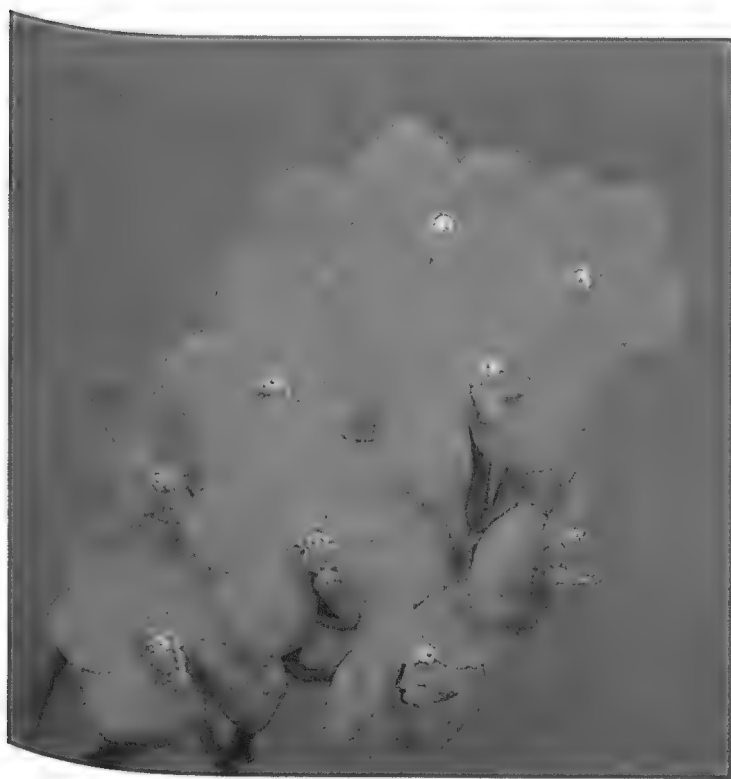
To obtain your catalogue, and with it a foretaste of the Ninth W.O.C., send to Mr. Thonglor Rakpaibulsombat, T. Orchids, 30/71 Suthisarn Rd., Thonglor Lane, Bangkok-4, Thailand.

Near perfection in small vandaceous orchids

"Of all the thousands of orchids I saw in Thailand *Vanda* Tan An Chai x *Ascocenda* Yip Sum Wah was the one that impressed me most", wrote Kevin McFarlane when sending these illustrations. Judge for yourself! This floescence can only be faulted on slight bunchiness and lack of balance. Otherwise the hybridiser's bid for large, well-shaped and coloured flowers on a small plant appears to have been very successful.



Both plants hybridised and grown by Phairot Lenavat.



Another recent Thai cross, notable for fine colour and well-displayed scape. Kevin didn't let this one get away: he landed it right back in Australia. It is *Ascocenda* Djaja — pronounced "ja ja".

NEW FULL COLOUR OUTSTANDING CYM

The most important listing of Cymbidiums ever published.

This catalogue is the most important listing of Cymbidium Orchids ever published. It introduces the vanguard of the new style Cymbidiums-Tetraploids: Tetraploids in all colours to flower throughout the whole of the Cymbidium flowering season from "ultra early" to "late".

By pioneering the use of Colchicine on a large scale we now have as stud plants the most highly prized collection of Cymbidium Orchids in the world. Tetraploids in colours of reds, yellows, greens, whites, pinks, polychromes and pure-colours.

We have flowered over 100 new, exclusive tetraploid clones. Flowering in the months of May, June, July, August, September and October.

This new 1978 catalogue lists over 50 exclusive mericlones, nearly all tetraploids; over 60 seedling crosses made with tetraploid parents. The resultant seedlings represent a new era in Cymbidium hybridizing. We confidently predict these new plants will create a whole new concept of quality in Cymbidiums from such super studs as our tetraploid clones of:

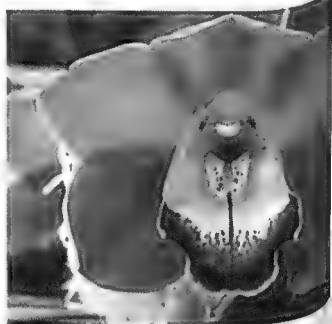
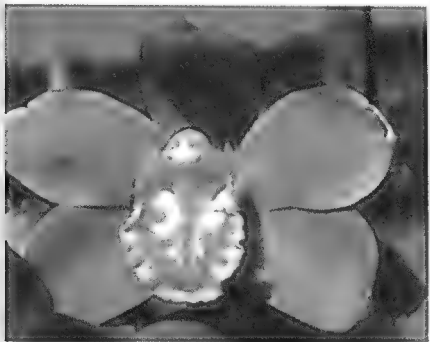
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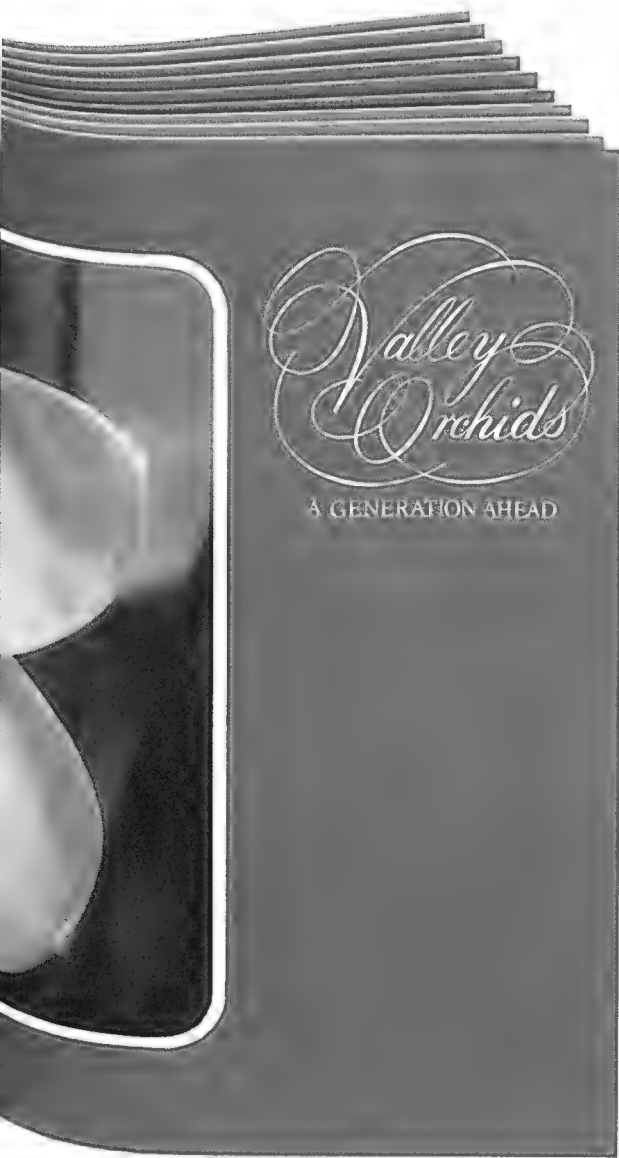


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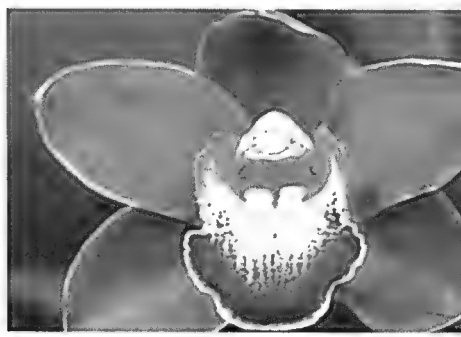
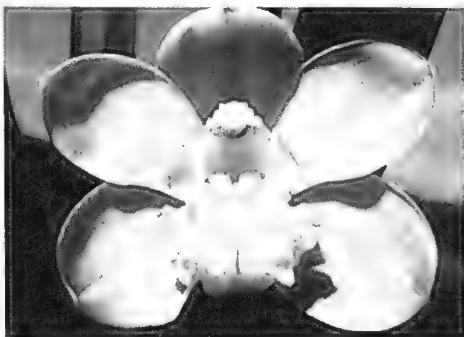
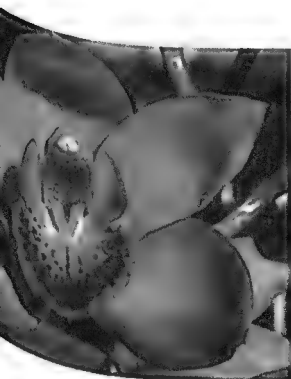
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A rare species and a unique colour form



The unique pink form of *Sarcochilus catus* is extremely rare. In the editor's 25 years' experience with the genus this is only the third occasion he has come across it. Mr. Gordon Hansen supplied the details of this recording published elsewhere in this issue.

Photo by courtesy of Harry Close

Thelymitra macmillanii is one of the terrestrial orchids now being raised from seed at the Canberra Botanic Gardens. It is known as the Crimson Sun Orchid or Salmon Sun Orchid, for the colour varies in different habitats according to soil and climate. Distribution is from Tasmania, through Victoria and south-east South Australia to south-west West Australia, but nowhere is it common. Size is about 20 mm across. Outstanding advances have been made at Canberra Botanic Gardens in growing such orchids from seed. See article in this issue.



Photo: Mark Clements

Culture of Australian Terrestrial Orchids

M. A. CLEMENTS

A Report from the Canberra Botanic Gardens

The purpose of this article is to summarise, up-date and report some results on work done on the culture of Australian terrestrial orchids at the Canberra Botanic Gardens.

CULTIVATION

In 1976 considerable changes were made in the general methods of cultivation of Australian terrestrial orchids. As previously described (Wrigley CBG 75/19 Dec., 1975) plants were grown in a U.C. mix with the addition of 25 per cent leaf mould. This mix in general was reasonably successful but created several problems, which were difficult to overcome. Liverworts and mosses on top of the soil was one problem creating conditions that ended in the shoots damping off.

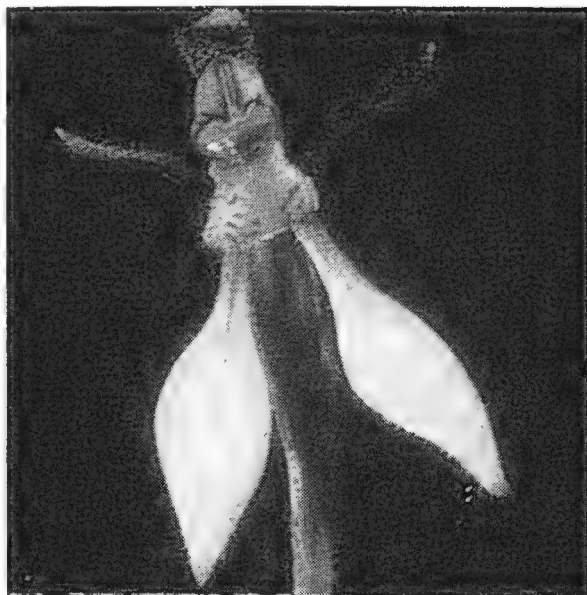
The mix also set very hard when allowed to dry out in summer, never quite regaining its former porosity when again watered in the next growing season.

A new mix was tried in the hope that it would overcome some of these problems. It comprised — 50-60 per cent sharp washed river sand, 20 per cent German Peat and 20-30 per cent partly-decayed *Eucalyptus* leaf litter or sawdust chips. This gave a well-drained, reasonably high organic content mix suitable for growing most terrestrials. In previous years the addition of liquid fertilizers, during the growing period, was a standard cultivation practice.

The application of rotting *Eucalyptus* leaves in the summer dormant months provided the alternative to liquid fertilizers.

Many species were also changed from terra cotta to plastic pots so that a comparison of plant performance in the two pot types could be made. Two sizes of plastic pots were chosen, a 170 mm (top), 135 mm (bottom), 115 mm (deep) and a 90 mm x 90 mm (top), 70 mm (bottom), 85 mm (deep). These both gave a good surface area while not being too deep and narrow.

Finally the collection was housed in cold frames that were under 60 per cent shade cloth. During the winter months the frames were covered nightly with glass as protection from the frost.



Eriochilus cucullatus

One of the few autumn flowering species and it is easily cultivated.

Photo: Mark Clements

The concept behind these changes was (a) to overcome some of the previous problems, such as damping off, etc.

(b) To permit lower maintenance and the use of readily available local products.

(c) To grow some of the more difficult species, because although the U.C. mix plus 25 per cent leaf mould was adequate for many species, it seemed to fail, after a short time, with some of the more difficult species such as *Prasophyllum rufum* and its relatives.

(d) To have a well-drained mix that could stand overwatering because the natural rainfall was now supplementing artificial watering.

RESULTS

(1) Liverwort Problem. The most obvious feature over the past 12 months was the total absence of liverworts from any of the pots with the new mix. Moss occurred in very small amounts in some pots but was never a problem and was usually an indication of too much peat moss in that pot.

(2) The Porosity Problem. Once again the results were extremely good with little

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*Calochilus robertsonii*

One species that has successfully been raised from seed at the C.B.G.

Photo: Mark Clements

or no problems in this area. Difficulties can occur however if the sharp river sand, peat and sawdust mix was sieved to a uniform size. In this case it seemed to pack down and not drain well.

(3) Growth. The results were very encouraging both above and below ground. Many species flowered for the first time and many were seen to improve markedly in leaf size; particularly over the latter part of the season. Many new plants were collected over the twelve month period and on examination of those pots recently it was found that almost all had formed new tubers ready for next season. Tuber and rhizome growth in most species was noted to be both larger and greater in number than in previous seasons.

(4) Pot Types. A comparison of plant size, number of flowering plant, tuber size and number of live plants at the end of the season showed conclusively in this situation that plastic pots were much more satisfactory containers.

(5) Housing Area. Although not totally satisfactory for all species, due probably to

the lower temperatures than the plants would normally experience in their place of origin, the use of cold frames proved to have more advantages than disadvantages and will continue to be used.

(6) Some difficult species that have not previously been grown have been checked and are quite healthy and should improve even further next season. Some of these were: *Leporella fimbriatus*, *Lyperanthus nigricans*, *Prasophyllum beagleholei*, *Prasophyllum densum*, *Prasophyllum woollsii*, *Adenochilus nortonii* and *Epiblema grandiflorum*.

GERMINATION

Much of the work done in the past 12 months, regarding terrestrials centred around the use of mycorrhizal fungi associations to stimulate the germination of seed. The present results are very encouraging and will be fully documented in a forthcoming paper.

TRANSPLANTING FROM FLASKS

This is still a very difficult area in the total understanding of the cultivation of Australian terrestrials. However, as previously reported (J. Wrigley, Dec., 1975) work is being done in this field with once again some encouraging results being obtained.

The new terrestrial orchid mix proved to be the best so far tried. 90 mm x 90 mm x 85 mm (deep) plastic pots were used and the seedlings placed individually just below the surface. They were watered with tap water daily and kept in the laboratory where the temperature was a constant 25 deg. C. The light was on a 16-hour day cycle.

Diuris sheaffiana tried in this manner grew from seedlings less than one centimetre tall to seedlings up to 12 cm tall in four months.

A List of Australian Terrestrial Orchids Growing at the Canberra Botanic Gardens:

Acianthus caudatus†, *A. exsertus*, *A. fornicatus*, *A. reniformis*, *A. tenuissimus*.

Adenochilus nortonii.

Apostasia wallichii (Family: *Apostasiaceae*)†.

Arthrochilus irritabilis†.

Bromheadia venusta†.

Caladenia alba†, *C. angustata*, *C. caerulea*, *C. carnea*, *C. congesta*†, *C. cucullata*, *C. deformis*, *C. dilatata*, *C. ensata*, *C. filamentosus* var. *tentaculata*, *C. flava*, *C. huegelii*, *C. latifolia*, *C. lyallii*†, *C. menziesii*, *C. patersonii*†, *C. praecox*, *C. rigida*†, *C. sericea*, *C. tessellata*†, spp. as yet undetermined.

Calanthe triplicata(*).

Caleana major.

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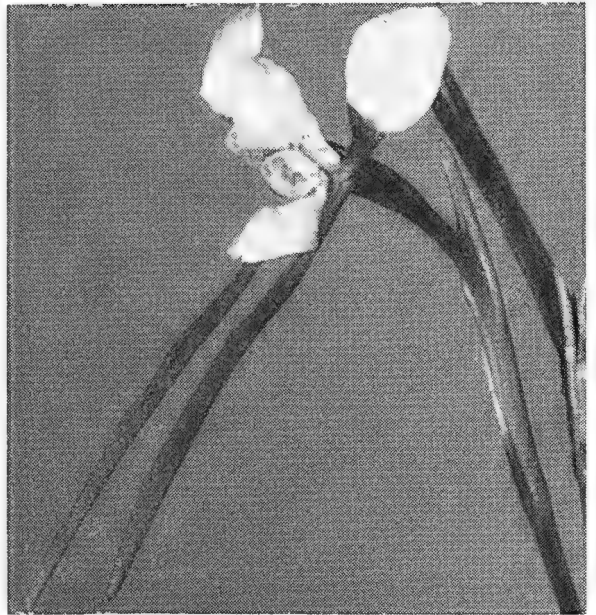
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Epiblema grandiflorum.
Eriochilus cucullatus, *E. dilatatus*.
Eulophia pulchra.
Geodorum densiflorum.
Glossodia major, *G. minor*.
Goodyera grandis.
Hetaeria oblongifolia.
Leporella fimbriata.
Liparis habenarina†, *L. simmondsii*†.
Lyperanthus nigricans, *L. sierratus*, *L. suaveolens*.
Malaxis latifolia, *M. xanthochila*.
Microtis atrata, *M. orbicularis*, *M. unifolia*(**).
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Orthoceras strictum.
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Diuris sheaffiana

A very rare species that has now been successfully raised from seed at the C.B.G.

Photo: Mark Clements

collina, *P. parviflora*, *P. pedoglossa*, *P. pedunculata*, *P. plumosa*†, *P. pulchella*†, *P. revoluta*, *P. rufa* ssp. *rufa*, *P. scabra* var. *robusta*, *P. truncata*, *P. vittata*, *P. spp.* (numerous).

Spathoglottis pauliniae†, *S. sp.* (Iron Range)†.

Spiranthes sinensis.

Thelymitra antennifera†, *T. aristata*(*), *T. carnea*(**), *T. chasmogama***, *T. cornicina*, *T. crinita*, *T. cyanea*, *T. flexuosa*, *T. fusco-lutea*, *T. grandiflora*, *T. ixiodes*(**), *T. ixiodes* var. *truncata*, *T. luteocilium*, *T. meia*†, *T. mucida*, *T. nuda*(**), *T. pauciflora*(*), *T. rubra*(**), *T. venosa*, *T. spp.* (undet.) Several(*)).

Zeuxine oblonga.

KEY

† Indicates collected within the past 12 months.

* Indicates grown from seed only.

** Indicates grown from seed only to flowering.

(*) Indicates grown from seed as well as from tubers

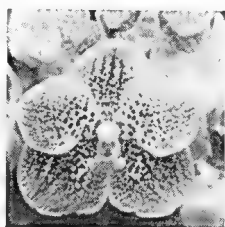
(**) Indicates grown to flowering from seed as well as from tubers.

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 Wrigley, J. W. The Culture of Australian Terrestrial Orchids. Dec. 1975 Department of the Capital Territory.

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JOANNARA				ASCOCENDA
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RENADES	RENANTHERA	RHYNCHOSTYLIS	RHYNCHOVANDA	
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Warrigal O.S. SPRING SHOW. East Preston Technical School Assembly Hall, next to Northlands and opposite Drive-in Theatre, Murray Rd., Preston. Set up 7th Oct., Fri. 8th 10 a.m. to 9 p.m. and Sun. 10 a.m. to 5 p.m. Asst. Sec.: Mrs. M. Murray, 60 MacArthur Rd., East Ivanhoe. Meets 1st Wednesday at Heidelberg Bowling Club Hall.

Geelong Orchid and Indoor Plant Club. SPRING FESTIVAL. Fairley Lodge-Sparrow Park, Hope St., West Geelong. Sat. 1st Oct., 2 to 9 p.m., and Sun. 2nd 10 a.m. to 7 p.m. Hon. Sec.: Mrs. K. J. Varley, 7 Patonga Crescent, Grovedale 3216. Phone 43-3149. Meets 1st Thursday in month, except January, in the T.P.I. Hall, Myers St., Geelong.

Sunraysia Orchid Club. SPRING DISPLAY. Venue 272 Deakin Ave., Mildura. Friday 16th to Sun. 18th Sept. 10 a.m. to 6 p.m. each day. No judging but award for popular vote. Hon. Sec.: Mrs. J. Ashworth, 44 Hazeldene St., Mildura 3500. Meets St. Andrews Hall, 2nd Tuesday.

N.S.W. MID COAST

Big Combined Display

Four mid coast Societies have combined to stage a major show at Gloucester in the R.S.L. Hall on 22nd October.

It will be known as the Combined Mid-North Coast Orchid Display.

The Societies are the Gloucester Orchid Society, the Manning River Orchid Society, the Hastings River Orchid Society and the Newcastle Native Orchid Society.

The display is non-competitive and its purpose is to promote interest and friendship between orchid growers and prospective growers. The hall will be open to the public from 10 a.m. to 3.30 p.m. The early closing is for the benefit of exhibitors who may have travelled long distances.

All these Societies have some particularly good native growers, and there should be some good late flowerers in other genera.

Definitely a Show worth seeing.

ORCHID SOCIETY OF N.S.W.

Late Spring Show

A Spring Show at Bondi Junction Plaza, Grosvenor Court, on Monday, 10th October to Saturday, 15th October. Open during shopping hours. Sponsored by Bondi Junction Merchants Association.

The show will take the form of a display of orchids and foliage plants and will be arranged by the Show Committee. There will be a non-competitive floral art display.

The Show Committee is the same as the Spring festival.

Exhibitors to make their own arrangements for delivering plants to Bondi Plaza by 1 p.m. on Sunday, 9th October, 1977.

Conditions as published in the Spring festival show schedule, where applicable.

SCHEDULE

Champion Orchid of the Show \$40

Reserve Champion \$20

- Class 1 Best Cymbidium.
 - (a) Green or yellow.
 - (b) Pink or mauve.
 - (c) Any other colour including white.
- Class 2 Best Dendrobium Softcane.
 - (a) Yellow.
 - (b) Pink or mauve.
 - (c) Any other colour.
- Class 3 Best Cattleya.
 - (a) Lavender or mauve.
 - (b) Other colour.
- Class 4 Best Novelty — Miniature Cymbidium.
- Class 5 Best Paphiopedilum.
- Class 6 Best Vandaceous.
- Class 7 Best Phalaenopsis.
- Class 8 Best Any Other Orchid.

In all classes prizes will be 1st \$12, 2nd \$6 and 3rd \$3.

NEW SOUTH WALES

Panania-East Hills R.S.L. Orchid Society. SPRING SHOW. Panania Senior Citizens' Centre, Anderson Ave., Panania. Sat. 24th Sept., 10 a.m. to 5 p.m. Mr. D. Roberts is Hon. Secretary, 70 Apex Ave., Picnic Point 2213. Phone 771-5474. Society meets first Tuesday in Panania-East Hills R.S.L. Club Sports Pavilion.

TASMANIA

O.S. of Nor-West Tasmania. SPRING SHOW. Burnie Civic Centre, from 6th to 9th October inclusive. Theme: Burnie Town, old or new. The Secretary is now Mrs. J. Samec, 281 Bass Highway, Ocean Vista, Burnie, Tas. Phone 31-3290. Details were not settled in time for the June issue and those published are consequently incorrect. Meets first Wednesday, United Church Hall, Burnie.

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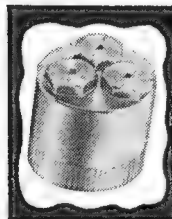
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Photos by Courtesy of G. Hermon Slade.



▲ *Epidendrum falcatum* is better known to most Australian growers by its synonym *E. parkinsonianum*. It comes from Central America, has short fleshy bulbs, and does well when grown with cattleyas. The flowers are up to 150 mm wide, very fragrant and long lived. The large white labellum, shaped like a moth, has an orange blob on the disc. It flowers during summer and autumn.

◀ *Epidendrum ibaguense* is generally known under its synonym *E. radiatum*. It is a reed stem type from Central America and Venezuela, and it is relatively easy to grow. The picture is not upside down as it is one of the few orchids to flower with the flowers inverted. Flowers are about 25 mm wide, white or yellowish green with dashes of dark or reddish purple in the labellum, and strongly scented.

For other aromatic orchids see page 155.



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 STH. AUST.: S. M. & Y. M. Isaacson, 10 Crown Street, Gawler East 5118. Tel.: 22-1482
 NEW ZEALAND: Paradise Orchid Nurseries, Box 2107, Tauranga Sth. Tel.: Tephuna 570

Growing Vandas in Sub-Tropical Queensland

A. WALKER

Vandas appreciate attention responding the more you attend to them. The modern Vanda hybrid flowers are wonderful examples of what breeding can accomplish, in size, form, colour, and floriferousness. Colours range from white, blue, pink, yellow, red grey, and many shades and combinations of these colours. A person can be very selective in growing Vandas and end up with very floriferous plants. I find some plants will throw two flower spikes at the same time, others only one. Some throw flower spikes on only one side of the plant while others alternate but only one at a time.

Vandas produce aerial roots and I have found that these roots should not be covered with compost. Vandas appreciate nourishment and because of the aerial roots, it is a good idea to spray the plants and leaves with a fine mist of your favourite fertiliser. I use a green organic fertiliser concentrate, complemented with a nutrient substitute every six weeks and urea every three weeks. All the plants receive a monthly application of Potassium Permanganate or Dithane M-45 fungicide which I have found best to suit my conditions. At the first sign of a flower spike I apply a low nitrogen base fertiliser to strengthen the spike and it appears to provide better texture in the blooms.

I mist the vandas daily every warm sunny day, only enough to wet the leaves and aerial roots and give a thorough watering once a week. During the cold weather I cut my feeding and watering so that the plants stay a little dryer. If a real cold spell prevails, I cover my few plants with plastic. This seems to help.

With reference to potting, anything seems to go as seen by other growers. I mainly use large charcoal, barks, elkhorn peat and stone as this affords ample drainage and aeration. All my vandas including terete types grow under shade cloth with sufficient flowering to keep me satisfied.

There may be other ways to grow Vandas but this has proved to be successful for me.

HUGE FAMILY

I'm quite sure most new growers don't really realize the magnitude of the vanda

family and also the various species used to create our family of hybrids. We've one section which has terete leaved segments. These plants are readily adaptable to greenhouse or outdoor culture and would be one of the easiest to grow under ideal conditions. Talking of outdoor culture in Queensland, which the terete type like, there are many ways of creating such a place somewhere in the yard where it will receive suitable day length hours and an abundance of fresh air.

One structure that I thought was very good was a water trough 6 ft. long and 1 ft. 6 ins. wide and 3 inches deep made out of concrete. There were 2 non-ferrous rods cemented into the trough and a pipe frame bent like the top rail of a gate with 2 down-pieces which slipped over the rods. The height was 2 ft. 6 ins. and between the rail K wire was attached. Near the base, about 3 inches from the edge of the trough was fastened a piece of giant bamboo on each side of the pipe. On top of this bamboo sat 3 inch square pots tied to the K wire and the vanda top cuttings were placed in the pots and fastened to the wire. Of course, this is only one method out of many and availability of materials will determine the type of structure to be built. I have also seen them placed on a raised bed and grouped together or attached along a wooden fence, the ideas are endless.

Some of the terete species and hybrids grown in this Maryborough district are *Vanda teres*, *V. teres 'alba'*, *V. hookerana*, *V. Miss Joaquin*, *V. Miss van Deun*, *V. Adina*, *V. Amy*, *V. Cooperi*, *V. Poepoe*, *V. footida*, *V. Petamboeran* and *V. Florida* to name a few.

Having planted and tied your top cuttings to the wire, water very sparingly. An addition of "Formulae 20" to your water appears to be beneficial. When new tips on the roots or new roots are evident, watering should be stepped up. I should have mentioned this earlier, that if at all possible, your vanda bed should lie or run North and South, this allows the sun to shine on both sides of the bed at all times. With reference to feeding they accept any high nitrogen type and under the growing conditions as above it could be

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given regularly in the form of light mistings. When the plants have reached about five to six feet, cut about three feet of the top off and replant the top against the fence. The top will continue to grow and flower and the base will reactivate with new plants from one or two node sections. All the blooms of this type make good cut flowers and a regular supply to place indoors can be achieved in a short space of time. If you wish to keep them growing in pots within the greenhouse like I do, hang them by pot hangers from the ceiling. This will provide them with suitable light for flowering and guard them against beetle attacks. Speaking on these pests, I have found a regular spray programme with "Wellspray", which has 25 per cent DDT solution added, quite satisfactory for all orchids and blooms growing outside, with no noticeable effect to the blooms. I spray this on very early in the morning before the heat of the day sets in otherwise minor scorching could result.

STRAP-LEAF VANDAS

The strap-leaf Vandas need abundant sunlight to produce good sprays of good coloured blooms, however, they are more apt to suffer from sunburn than the terete types, so I have found it necessary to provide shading up to 50 per cent. Even with this light shade, some yellowing of the leaves can occur due to too strong a light difference between seasons and to counteract it a spraying of a high nitrogen foliar fertiliser usually corrects this. I have found that vanda seedlings seem to respond better if they are shifted into a size larger pot or basket every six months, by the time they have reached flowering size they should be in a ten inch pot. Many different potting mixtures can be used, remembering that large pieces allow free access of air to the root system. All vandas grow upright (monopodial) and their roots appear at intervals up on the stem, if the roots extend out of the pot, let them attain about six inches and with a slight twisting action around their axis bend them back into their container. There are not many species in my collection now having had to make way for complex hybrids, however, I still have a couple of favourites.

Vanda luzonica which is in bloom now, reminds me of purity. It is glistening white with a crimson marking on the edge of the petals and sepals while the lip is red purple. It is highly scented and flowers measure

7 cm. This majestic looking plant dominates the house with many spikes of free flowering blooms.

Vanda tricolor and *Vanda suavis* have much the same form of growth and flower except their colour varies and is densely spotted.

Vanda coerulescens is a continual bloomer during the late autumn and winter and is showing two spikes at present. When it is in bloom it makes up for its small size with as many as up to 30, 25 mm to 37 mm blooms of pale blue petals and sepals while the lip is deep violet blue.

Vanda whiteana is a collectors piece being the only fully substantiated vanda native species. It resembles *Vanda limbata* and *Vanda merrillii* in colour.

Vanda cristata was a real odd type. It had quite unusual flowers about 60 mm of pale green, a cream to white lip with red purple striping from the throat. The blooms stayed close to the plant on very short spikes but this may have been the habit of my plant.

I once had *Vanda spathulata* which just grew wild. It really resembled a robust reed stem epidendrum but the flowers were beautiful. They were just over 25 mm wide, clear yellow and flat. I swapped this plant for some of the first ascocendas in my collection.

There are of course many other species to be grown and appreciated and to my mind the plant that I would like to have and to successfully grow and flower is the prized dark blue *Vanda coerulea* from the Chiang Mai and Tak province.

Many fine hybrids have evolved from these two species, and many which are now flowering for the first time in Australia have flowered in Thailand, and progeny in the form of super vandas are in near flowering stages. On our market, plants like *V. Diane Ogawa*, *V. Onomea*, *V. Jennie Hashimoto*, *V. Lenavat*, *V. Rothschildiana*, *V. James Toogood*, *V. Hilo Blue*, *V. Gertrude Myamoto* and *V. Eisenhower* are available as flowering size plants, and importing of the finer forms from Thailand is being accomplished by a few southern and Maryborough growers.

Of seedlings still to flower, in my collection, plants bearing parents such as *V. Joan Rothsand*, *V. Obha*, *V. Patou*, *V. Neva H. Mitchell*, *V. Satta*, *V. Tub Tim Tepya*, *V. Aurawah*, *V. Sinard*, *V. Mem. Mme Pranerm*, *V. Pranerm Ornate*, *V. Thananchai*, *V.*

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Nancy Rodillas, *V. Laurel Yap* and *V. Aurawan* are but a few to be seen in seedlings in this State which hold good promise as fine flowers. The ascocendas, famous for their vivid bright coloured flowers are popular with our Maryborough growers. Plants such as *A. Meda Arnold*, *A. Yip Sum Wah* and *A. Madame Panni* have been responsible for some of the finest colours and the widest range of colours in the orchid world. Many second generation crosses are being flowered throughout this State along with the first generation and the differences that I have observed have been larger flowers but less of them. Some third generation plants are near flowering stages and these should produce larger flowers with heavy vanda influence.

Some very nice second generations using *Asca. Meda Arnold* have been crossed with *Vanda sanderana*, *V. Diane Ogawa*, *V. Jennie Hashimoto*, *V. Onomea*, *V. Susan Lyn*, etc., likewise *A. Yip Sum Wah* and *A. Madame Panni* have also been crossed with the same results. Of course there are still many second generations to flower using the new hybrid vandas here in Maryborough so we shall have to be patient to see the results.

For the new growers of ascocendas, start with second and third generations like *A. Meda Arnold* and *A. Yip Sum Wah* crossed with vandas, and their progeny crossed on to vandas again for larger type blooms, contrasting colours in the blue and yellow which is not found in the first generation. If, however, your taste is for many smaller blooms up to 5 cm, plants like *A. Meda Arnold*, *A. Yip Sum Wah*, *A. Sun Funn*, *A. Madame Panni*, *A. Eileen Beauty* would be some of the best to choose from.

COMPLEX BREEDING

In the autumn of Maryborough's year the strap and semi strap leaved vandas are flowering and continue to do so through to October depending upon the parentage. Those present at our April Society meeting saw two very fine examples of the *V. sanderana* influence upon vandas. They were *Vanda Suphan Buri* owned by Mr. F. Williams and *Vanda Kapiolani* owned by Mr. R. Walton. *Vanda Suphan Buri* is the resultant cross of *V. Joan Rothsand* x *V. Mem. Mme Pranerm*. *V. Joan Rothsand* was bred from *V. coerulea* crossed with *V. sanderana* to make *V. Rothschildiana*, by crossing this with the species *V. luzonica*, *V. Joan Swearington* was

produced. *V. Rothschildiana* was used again with *V. sanderana* to make *V. Onomea* and by crossing *V. Onomea* with *V. Joan Swearington* the *V. Joan Rothsand* resulted. Most *V. Joan Rothsand* blooms have been very similar to *V. sanderana* but showing more spotting on the dorsal and petals. The lower sepals have been darker while the other segments a deep rich pink.

Vanda Memoria Madame Pranerm was: *V. dearei* x *V. sanderana* to make *V. Ellen Noa*. *V. Ellen Noa* was then crossed with *V. Rothschildiana* to make *V. Waipuna* on one side and *V. Ellen Noa* with *V. sanderana* to make *V. Eisenhower* on the other. *V. Waipuna* was crossed with *V. Eisenhower* to make *V. Mem. Mme Pranerm*.

V. Mem. Mme Pranerm produced some very variable colours, some were yellow with heavy red spotting, some deep mauve colours and the most appreciated clone 'Lenavat', a rich strawberry pink overall with a border of lime yellow about 4 mm around the perimeter of the bloom.

The crossing of *V. Joan Rothsand* with *V. Mem. Mme Pranerm* resulted in a plant named *V. Suphan Buri*. The plant tabled by Mr. F. Williams favoured the *V. Joan Rothsand* to give a similar bloom as that described for the *V. Joan Rothsand* previously. Shape was excellent, it was symmetrical and generally flat in form, circular in outline and reasonably filled in with the petals and sepals broad and close.

The other vanda tabled by Mr. R. Walton was *V. Kapiolani* a cross between *V. Onomea* and *V. Ohuohu*. As described previously *V. Onomea* is *V. Rothschildiana* x *V. sanderana*. *V. Ohuohu* began with a crossing between *V. tricolor* and *V. sanderana* to make *V. Tatzeri*, this was crossed with *V. sanderana* to make *V. Clara Shipman Fisher* and when again crossed with *V. sanderana* the plant *V. Ohuohu* was named. By crossing *V. Onomea* with *V. Ohuohu* the plant *V. Kapiolani* was named. The colour of this plant did not favour its parents, which were *V. Onomea* 'Yellow' x *V. Ohuohu* 'Yellow'. I would have thought a strong yellow influence but apart from that it was a very desirable flower. It was a red brown flower very similar to a *V. Obha* I saw on a catalogue.

Basically the most admired vandas are *Vanda sanderana* and *Vanda coerulea*. *Vanda sanderana* comes from the Philippines and

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Mindanao region while *Vanda coerulea* is distributed along the northern border of Tak province, adjacent to Mae Honson and Om Koy district, then northward to Fang and east along the Thailand-Burma border to Chiang Mai province. Rarer shades of pink to an albino shade are found in the Om Koy district, Chiang Mai province, while the plants of dark blue color with long spikes of numerous prominent and even tessellated blooms come from Doi om Mok (Foggy Hill) and Tak province. Both areas are about 4,000 feet above sea level in mountainous high humidity, tropical forest.

Many fine clonal forms of these two vandas have been named such as *V. sanderana* 'Jonella', 'Horavichai', 'T. orchids', 'Shimamoto', 'Constance Lau', 'Lenavat', 'Terry', 'Joe E. Dew'. In *Vanda coerulea* forms such as *V. coerulea* 'Tain', 'T orchids', 'Taraphya', 'Thantip', 'Chumporn', and 'Barbara Wilkins' to name just a few.

9 Draeger St., Baddon, Maryborough 4650

FOURTH N.S.W. REGIONAL CONFERENCE

The guest society, Blue Mountains and District Orchid Society, promises an interesting and fun-packed week-end for all who attend this Conference in 1978.

The programme is designed to interest all orchid lovers, whether novice or advanced growers. If wives or friends are not interested in the orchid talks then they have a choice of special entertainments for their benefit.

The Conference is to be held at the Katoomba High School, Martin Street, Katoomba. The Conference Show will be open on Friday 29th Sept. and run to noon on Monday 2nd Oct. Setting up takes place on Thursday 28th Sept.

The Blue Mountains scenery is a delight. There are many superb gardens in the area, and most spring flowering native plants will be like jewels in the bushland. This is an ideal time to visit the Blue Mountains.

Plan to be there in '78.

Widow with two young children in a rapidly developing area of Queensland is unable to manage an established property and is seeking a partner to care for the orchids and small crops. Live-in accommodation available to the right person.

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Plant in a million

GORDON HANSEN

See Colour Illustration on Page 136

Keen orchid grower Alan Flanigan was riding the back paddock of his property, checking some cattle, when a newly fallen tree caught his attention. He rode close in a cursory check for orchids and it was soon apparent to him that plants of *Sarcochilus falcatus* were scattered through the broken branches.

One plant attracted his attention because of its longer and thicker leaves and its specimen size. Knowing that it would ultimately face extinction on the dying tree Alan removed it, motivated too by curiosity as to how such a robust clone would flower. At that time it was not even in spike.

Alan's home was then at Tom's Creek, which runs along the base of Comboyne Mountain, and his bushhouse provided an environment perfect for this species. Aided also by lavish doses of tender loving care the newly-saved clone thrived.

The buds seemed more robust than is usual and accordingly he awaited their opening with interest. Nevertheless he was not prepared for the shock that came when they opened to reveal a lovely pink flower.

Pink is definitely a million to one chance with this species. Yellow is only slightly less rare. White with heavy purple markings is uncommon, as is an absolutely pure white. The usual colour form is white with light markings of purple.

Many trips were made back to the fallen tree at flowering time but the remaining plants were all normal colouring.

Alan brought it to his Society's Spring Show where I, as Judge, had the pleasure of nominating it as Champion of the Show. It is most unusual for one of our natives, which are usually small-flowered like this 25 mm *Sarcochilus falcatus*, to be a Show Champion, but this has happened on at least three other occasions in recent years.

During a recent visit to Wauchope I found Alan had left the farm and was working at Timber Town, the well-known tourist attraction. He is still growing his orchids and guarding his rare one like a crown jewel.

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▲ *Cattleya intermedia*. Pictured is the alba form which is comparatively rare, a rich rose-purple being the usual type. There are usually two or three flowers on a stem, each up to 100 mm wide. Not only is it fragrant but flowers are long lasting. It is found in Paraguay, Uruguay, and southern Brazil, which means a climate comparable with coastal N.S.W. and Victoria. It flowers in Spring.

◀ *Laelia anceps*. A showy cool grower from Mexico and Honduras with many fine forms. Colour varies from white to rose-purple with a touch of yellow in the labellum. Flowers have a delicate fragrance, with usually two on the end of a long stem, but one or three are common. Spring flowering. It can be grown in pot or on slab to specimen size.

▼ *Laelia speciosa*. A species from the mountains of Mexico with a flower up to 150 mm across. Segments are usually rose-mauve and there is a rare alba form. The lip is edged with lilac, with a white mid ground and touch of yellow in the throat. Flowers in Spring.



■ These species are cool growers. An unheated glasshouse is suitable in most areas, but in districts where severe frosts and snow occur appropriate protection is necessary. A bark compost of small to medium size is suitable but feeding during active growth is necessary. Any other cattleya mix, such as bark, charcoal, and chopped up fern, can also be used. Plastic or terra cotta pots can be used but a mixture of pot types is inadvisable. *L. anceps* does well on a fern slab.

For other fragrant orchids see page 145.

Photos by Courtesy of G. Hermon Slade.

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Australian Orchid Foundation in Action

Major projects have been initiated by the directors of the Australian Orchid Foundation in order to further the Foundation's objectives of benefiting orchids and improving our knowledge of them.

THE SEED BANK

Members and well-wishers will collect seed from their local areas or garden-grown orchids. The seed will be packaged by the Foundation and made available at a small cost.

The Foundation regards this as a possible effective approach to the conservation of species orchids, and one which could attract overseas interest.

As well as Australian species the Foundation will be involved in seed of any orchid species of special merit.

Thirty batches of fresh seed from Mexico will be available at the end of September, and readers are invited to submit seed from Australian natives for overseas distribution. Mr. Len Lawler is curator of the seed bank. Contact him at The Department of Biochemistry, University of Sydney 2006.

SLIDE COLLECTION

Already the Foundation has excellent slides of 170 Australian natives. Growers are invited to contribute, sell, or exchange for film, good slides of the orchids of their area.

Shortly it is proposed to make duplicates available at a nominal cost in order to create a greater interest in natives.

SCIENTIFIC ORGANISATION

The Foundation has been classified by the C.S.I.R.O. as an "Approved scientific and research organisation". Its objects are very broad, embracing all orchids of the world, but there is naturally a moral obligation towards Australian species.

Donations to assist these objectives are tax deductible.

Last year the Foundation helped finance



The Research Committee of the Australian Orchid Foundation which met in Canberra recently to draw up a research programme. Each member is a distinguished scientist. They are, from left to right: Mr. Donald F. Blaxell, Senior Botanist, Royal Herbarium, Sydney; Mr. Leonard J. Lawler, Department of Biochemistry, University of Sydney; Mr. John W. Wrigley, Curator, Botanic Gardens, Canberra; Dr. Peter S. Lavarack, Senior Botanist, National Parks and Wildlife Service of Queensland; Mr. David L. Jones, Horticulture Scientist, Department of Agriculture, Victoria; Mr. Alex S. George, Senior Botanist, Department of Agriculture, W.A. Each of these gentlemen is recognised as an authority on Australian orchids.

an expedition to examine the orchids of the remote Iron Range area of Cape York, during which an entirely new dendrobium was discovered.

DENDROBIUM TOZERENSIS

The new dendrobium was pictured on the March, 1977 cover of this journal, and has now been named *D. tozerensis* after Mt. Tozer on which it was found.

MEMBERSHIP

The Foundation is a voluntary and non-profit organisation with a membership limit of 50. Membership is by invitation, extended to those who can be involved in the projects of the Foundation.

In addition there is a Research Committee of scientists accredited by the C.S.I.R.O. Two scientists, Mr. David Jones and Mr. Len Lawler, have recently been confirmed as new members.

Well known worker for orchids Mr. Frank Slattery of Sydney has just been appointed the seventh member of the Board of Directors.

YOU CAN HELP

Your suggestions regarding projects for the benefit of orchids and orchid knowledge are warmly invited. They should be sent to "The

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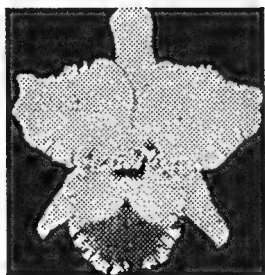
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EXCITING DEVELOPMENTS

Some exciting Foundation projects are in the pipeline. Learn about them in the next issue.

AUSTRALIAN ORCHID FOUNDATION REPORT

Import and export of orchids and the Convention of International Trade in Endangered Species.

On 27th October, 1976, Australia's ratification of the Convention on International Trade in Endangered Species of Wild Fauna and Flora came into effect. The Customs (Endangered Species) Regulations made under the Customs Act of Federal Parliament give effect to the provisions of the Convention.

The family Orchidaceae are listed in Appendix II of the Convention. The rules governing import and export of organisms listed in Appendix II include the following:

2. The export of any specimen of a species included in Appendix II shall require the prior grant and presentation of an export permit. An export permit shall only be granted when the following conditions have been met —

- (a) a Scientific Authority of the State of export has advised that such export will not be detrimental to the survival of that species;
- (b) a Management Authority of the State of export is satisfied that the specimen was not obtained in contravention of the laws of that State for the protection of fauna and flora.

4. The import of any specimen of a species included in Appendix II shall require the prior presentation of an export permit".

A few orchids are listed on Appendix I. These are: *Cattleya jongheana*, *C. skinneri*, *C. trianae*, *Laelia lobata*, *Didickea cunninghamii*, *Peristeria elata*, *Lycaste virginialis* var. *alba*.

The same provisions apply to these with the additional provisos that before import is allowed both an export and import permit are required. Conditions for the issue of the export permit are as for Appendix II, while the conditions for the issue of an import license are as follows:

- (a) A Scientific Authority of the State of import has advised that the import will be for purposes which are not detrimental to the survival of the species involved;
- (b) A Scientific Authority of the State of import is satisfied that the proposed recipient of a living specimen is suitably equipped to house and care for it;
- (c) A Management Authority of the State of import is satisfied that the specimen is not to be used for primarily commercial purposes".

In Australia the "Scientific Authority" is the Australian National Parks and Wildlife Service Department. The "Management Authority" is the Customs Department.

The list of member countries was as follows at December, 1976: U.S.A., Nigeria, Switzerland,

Tunisia, Sweden, Cyprus, Ecuador, Chile, Uruguay, Canada, Mauritius, Nepal, Peru, Costa Rica, South Africa, U.S.S.R., United Arab Emirates, Brazil, Madagascar, German Democratic Republic, Morocco, Ghana, Papua New Guinea, Federal Republic of Germany, Pakistan, Finland, India, Zaire, Norway, Australia, United Kingdom, Iran.

It is likely that many more countries will ratify the Convention in the future. There is provision for trade with Nations not party to the convention but only if they provide documents similar to the required import and/or export permits.

It will be noted that several large exporters of orchids are party to the convention; e.g. India and Brazil.

The Australian Orchid Foundation would appreciate any suggestions for the inclusion of orchids or other plants in either of the major lists. (e.g. Appendix I or II). To qualify for Appendix I the species must be actually in danger of extinction and either be traded or have a potential for trade. For Appendix II a species need not currently be threatened with extinction, but there should be some indication that this may occur in the future. Again the species must be either traded or have a potential for trade.

All Orchidaceae are presently listed in Appendix II with the exception of seven species, none of which are Australian, in Appendix I. Do any Australian species fit the description of an Appendix I species?

Should you have any suggestions about the inclusion or exclusion of plants from either table you could contact Dr. P. S. Lavarack, C/- Animal Research Institute, Fairfield Road, Yeerongpilly, Qld. 4105 or the National Parks and Wildlife Service (or equivalent authority) of your particular State.

MYSTERM OF PAPHIOPEDILUM MADIANA STAN CONDON

A particularly good paphiopedilum hybrid known as Madiana Sable was imported into Australia by Mrs. Haytor of Arncliffe, several years ago. The hybrid was never registered under this name. In an effort to trace its parent, I have written to Mr. Peter Black, the hybridiser; his explanation is quoted in full:

"When I named this cross Madiana and sent in the form I had it sent back because I had named and registered the same cross *P. Maginot* x *P. Diana* Broughton as *P. Diny* in the middle 'fifties. I then remember the circumstances, which were that it happened at the fiftieth anniversary of the Dutch Orchid Society, where I had a good group of paphiopedilums and gained many medals and prizes. I was asked by the President of the Society if I would name a paphiopedilum after the young lady who had done most of the organising work, which I, of course, agreed to".

Perusal of "Sanders" List of Orchid Hybrids confirms that *P. Maginot* x *P. Diana* Broughton was, indeed, registered as *P. Diny* by Black & Flory in 1957.

Proud owners of the paphiopedilum previously known as *P. Madiana* 'Sable' should now alter the name to *P. Diny* 'Sable'. Any other *P. Madiana* clones should, of course, be re-christened *P. Diny*.

I would like to express my sincere appreciation to Mr. Black for clearing up the mystery.

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- 173 Blc. Hemlock Pass 'Bel Air' x Blc. Sunset Gorge — Green.
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- 151 Bc. Mount Anderson — Pink.
- 170 Odm. bictoniense x Onc. gracile — Pink. Yellow.
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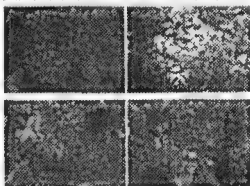
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ORCHID CLUB OF S.A.

Winter Show

Four hundred members and friends attended the Winter Show held on 7.7.77. The quality of blooms indicated careful attention by the owners.

An added attraction was the competition offered by growers from N.S.W., and the pleasure of having Mr. Athol Bell as guest speaker for the evening. Also the Judges had the expertise of Mr. Frank Slattery who assisted with the judging.

Champion of the show was *Blc. Malworth 'Orchidglade'* exhibited by Mr. Ray Dean of N.S.W. The plant had two exceptional yellow flowers of lovely form, the slightly deeper yellow lip edged with a soft orange/pink.

Champion Paphiopedilum was *P. Maudiae 'Magnificum'* exhibited by Mr. Bill White. A nicely grown plant having one lovely green flower with a stem approximately 45 cm. in length. The plant was runner-up to the show champion.

Champion miniature cymbidium was *C. Gareth 'Latangor'* exhibited by Mr. and Mrs. A. Sullivan. A nicely grown plant with several well-arranged spikes of green/brown colouration.

Champion novelty cymbidium was *Pelleas 'Monterey'* exhibited by Adelaide Orchids. A small plant having two erect spikes of well shaped flowers, brownish in colour and the bottom of the lip blotched a deep purple.

Several other most attractively presented slipper orchids were grouped by owners as boxed displays, which certainly attracted much attention.

Awards: The Judges awarded the following plants at the show:

Mr. Ray Dean's magnificent *Blc. Malworth 'Orchidglade'* was granted a First Class Certificate OCSA. A rare award to be gained anywhere today.

Mr. Ray Dean's *Potinara Jungle Fires 'Eldorado'* gained an Award of Distinction, OCSA, for the outstanding red/purple coloured flowers.

Novelty cymbidium *C. Pelleas 'Monterey'* gained a Highly Commended Certificate, OCSA, for owners Adelaide Orchids. A shapely novelty.

Pterostylis nutans exhibited by Mr. Les Nesbitt gained an Award of Commendation. The 30 cm. pot contained 36 individual plants each with a lovely greenish flower, most stems near 30 cm. in length. Mr. Nesbitt has gained for himself quite a reputation by exhibiting the Australian Terrestrial native orchids in such a commendable manner.

Autumn Show Report

The champion of the show was *Oncidium Nonamyre 'Vili'* owned by Mr. and Mrs. Auliciems. This lovely *Oncidium* was growing in a small terracotta pot. It was only a small plant and when it makes up in future must certainly be a winner in any company. The plant carried one arching spike having 16 perfect flowers, the labellum a strong yellow colour, petals and sepals a pleasing brown faintly striped with yellow.

The Judging panel also considered the plant for awarding and it was granted a Highly Commended Certificate — a worthy conclusion for the show champion. (No. 83 OCSA).

AWARDS MADE BY THE OCSA JUDGES

No. 79 *Lc. Saba 'Chiselhurst'* owned by Mr. G. Cottle, granted a HCC/OCSA. This plant displayed two lavender-purple flowers on a strong plant. The lip was a deeper red-dark purple. A shapely cattleya

which had quite a lively sparkle when viewed in sunlight. An extra bonus was a lovely perfume.

No. 80. *Blc. Indian Treasure 'Bronze Glory'* owned by Mr. T. Burian, granted an AD/OCSA. A striking cattleya of a tan-orange colouring. Depending on the angle of viewing the flower had a "shot silk" appearance. It was the unusual and exciting colouring that the Judges considered it worthy of the Award of Distinction.

No. 81. *Sophrontitis coccinea 'Kam'* owned by Mr. Ken Minne granted HCC/OCSA. A small plant with one exceptionally well-shaped flower of a bright red colouring. When viewed in light the flower appeared to have iridescent veining through the petals and sepals.

No. 82. *Phalaenopsis Carmen Coll 'Adelaide'* owned by Adelaide Orchids, granted AD/OCSA for its outstanding colouring. Again a small plant with one spike, having two fully opened flowers and three buds to open. The flower was awarded for the outstanding striations on the petals, which were a deep magenta like colour, intensifying at the centre of the petals, making it a most distinctive, heavy textured flower.

No. 83. *Onc. nonamyre 'Vili'* owned by Mr. and Mrs. Auliciems granted HCC/OCSA on 5.5.77. A small plant carrying one semi-arching spike, having 16 perfect flowers, the labellum a strong yellow colour, petals and sepals a pleasing brown faintly striped with yellow. A desirable clone.

No. 84. Miniature *Cymbidium pumilum 'Album'* x *C. Radak 'Oasis'* owned by Mr. and Mrs. Auliciems granted HCC/OCSA on 2.6.77. A well-grown plant perfectly presented by the owners. Eleven fully opened and three unopened racemes perfectly spaced around the pot in a pendulous habit.

No. 85. Miniature *Cymbidium Katydid 'Veridian'* owned by Valley Orchids granted HCC/OCSA on 19.5.77. A well grown plant displaying seven pendulous spikes and two unopened. A feature of the plant being the early flowering tendencies and the distinctive lime green colouring.

No. 86. *Blc. Malworth 'Orchidglade'* as previously quoted.

No. 87. *Potinara Jungle Fires 'Eldorado'* as previously quoted.

No. 88. Novelty *Cymbidium Pelleas 'Monterey'* as previously quoted.

No. 89 *Pterostylis nutans* as previously quoted.

No. 90 Miniature *Cymbidium pumilum* x *C. Celtic 'Oak'* owned by Mr. H. Lambert granted HCC/OCSA on 18.7.77. A small plant flowering for the first time off one made up bulb. Displaying two spikes, one having 24 flowers and the other 18. The colour was an attractive green.

O.S. OF WESTERN AUSTRALIA

Winter Festival

KEN REX

By invitation from the management of Boongoon Garden City Shopping Centre, the Orchid Society on the evening of July 12, once again gave the shoppers a spectacular display of orchids and foliage plants over a period of three and a half days.

The central circular stage was massed to a twelve foot peak with quality foliage plants in front of which, on the stage perimeter, were staged all the classes of paphiopedilum and cattleya. Several random displays, from floor level were set around the centre piece and featured cymbidiums, mini

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cymbidiums, miscellaneous genera and a native section. Dispersed amongst these were the affiliate society and individual displays, with the ladies floral and corsage display.

A focal point of the show was a very elegant floral arrangement by Mrs. Herman. The theme "Spring Sonata" was well portrayed with the use of a porcelain violin set between classical urns overflowing with orchid blooms and foliage.

The trophy winners were: Champion Paphiopedilum, P. Mad Hatter 'Brecon', Mr. G. E. Marshall; Reserve Champion, P. Beckenham, Mr. R. P. Lakides; Best Novice Paphiopedilum, P. Sweet Harmony 'Lemon Hart', Mr. and Mrs. L. Mumblings from the Bunbury Orchid Society. Best Seedling Paphiopedilum, P. 'Tan Gold', Mr. and Mrs. W. Janney; Champion Cattleya, C. 'Luna Orbit', Mr. and Mrs. L. Gale. Dr. H. M. Hill gained a Cultural Certificate for a fine specimen plant of P. *insigne* 'Sanderac' with 15 well-grown blooms.

The AOC award for the most pre-eminent entry was gained by D. Amethyst x Lady Hamilton x Self, a fine plant with five large racemes of flowers, grown by Mr. and Mrs. L. Gale.

Mrs. Kaye Bagliss was successful with first prize in both the floral arrangement and corsage sections in which there was a marked increase in the number of corsage entries this year. Congratulations to all exhibitors and the many willing hands.

105 Hayes Avenue, Mt. Yokine 6060

ORCHID SOCIETY OF N.S.W.

Winter Show

As last year this show graced Australia's largest shopping centre, Parramatta Westfield. We have grown used to good early cymbidiums dominating Winter Shows in recent years so it proved a surprise when they failed to arrive this time. Some society displays did not have one.

However lamentable the effects on competitive marking, this deficiency at least ensured that other genera received due emphasis.

North Shore O.S. featured a "Tropical Grandstand View", the palm frond "grandstand" serving to eliminate background distractions and enhance the wide range of quality genera. The display achieved a runaway first place.

Eastwood O.S. made a meritorious second place with a display surrounded by the cliffs of Victoria's Great Ocean Road.

Parramatta, in a creditable third place, featured a "Garden Scene".

Themes were all free choice and all ingenious, with Sutherland O.S., leading orchidphiles "Up the Garden Path", and Bankstown O.S. appropriately for Jubilee Year, featured a "Jubilee Garden"; Western Suburbs O.S. had a meandering "Tranquil Stream", and Eastern Suburbs "25th Birthday" naturally centred around orchids and champagne. Berowra O.S. went to the extent of wrecking a shipload of orchids on a convenient tropic isle. St. George O.S. idealised "Natural Beauty" and Ku-Ring-Gai O.S. said it all under the banner "Our Hobby".

Grand Champion of the Show was a beautifully flowered plant from Wondabah Nursery of *Paphiopedilum* Sheerline 'Rondo'. P. Sheerline is a cross between P. Bradford and P. Lemon Hart, registered by the Radcliffe Nursery in 1962.

New Orchid Names

Dendrobium Hilda Pozon = *D. speciosum* x *D. tetragonum*. This cross was made by the late Arthur Butler and is widely distributed. It has been registered by Dr. N. J. Grundon of Too-woomba and named after a member of the Darling Downs Native Orchid Society.

Dendrobium Allyn Princess = *D. Maui Beauty* x *D. bigibbum*. Bred and registered by V. and N. Jupp.

Dendrobium Goose Bumps = *D. teretifolium* x *D. cucumerinum*. This is the first registration involving *D. cucumerinum*. From V. and N. Jupp.

Cymbidium Memoria Bill Sternbeck = *C. Lunagard* x *C. Preview*. Registered by H. Boyd.

Cymbidium Boronia = *C. Sussex Dawn* x *C. Westholme*. Registered by Valley Orchids Ltd. Hybridised by Dr. R. Vandyke.

Cymbidium Ides of March = *C. pumilum* x *C. elegans*. Valley Orchids Ltd. (Dr. R. Vandyke).

Cymbidium Ireland = *C. elegans* x *C. Monsoon*. Valley Orchids Ltd. (Dr. R. Vandyke).

Cymbidium Palace Court = *C. Fred Stewart* x *C. Palomar*. Valley Orchids Ltd. (Dr. R. Vandyke).

NEW SPECIES

Note that the *dendrobium* illustrated on the cover of the March issue of "A.O.R." has now been named *Dendrobium tozerensis* after the Mt. Tozer near which it was discovered.

NEW GENUS

In 1916 Dr. Rudolf Schlechter separated the hardy Mexican and Central American group of the genus *odontoglossum* into a separate section which he named *Rossioglossum*. It was his intention to give this section further study with a view to giving it status as a separate genus but his untimely death prevented this.

It has been obvious to growers of *odontoglossum* that this section had markedly different characteristics to the cool-growing plants of Columbia and the Andes region generally.

Now, writing in the *Orchid Digest* of July-August, 1976, Dr. Leslie A. Garay of Oakes Ames Orchid Herbarium and George Kennedy of the Geophysics Department, U.C.L.A., Los Angeles, California, say:—

"Fully convinced that this group of species justly constitutes a genus distinct from *Odontoglossum* we wish to accept Schlechter's suggested name and to make the necessary nomenclatorial changes accordingly."

Thus, *Odontoglossum grande* is now properly known as *Rossioglossum grande*.

O. powellii becomes *R. powellii*.

O. insleayi becomes *R. insleayi*.

O. splendens becomes *R. splendens*.

O. williamsianum becomes *R. williamsianum*.

O. schlieperanum becomes *R. schlieperanum*.

Varieties of any of the above species will also conform to the above changes.

Growers should change the name tags on their plants.

NEW SECRETARY FOR PARRAMATTA O.S.

This N.S.W. society has now appointed Mr. G. S. Banks to the position of honorary secretary. His address is 34 Gideon St., Winston Hills 2153. Society meetings are held in the Wentworthville Community Centre, Darcy Road, Wentworthville on the second Tuesday of each month.

New Regional Orchid Council

Early this year the far North Coast orchid societies were visited by the prominent Sydney growers and orchid administrators Messrs. Bert Schwartz, Athol Bell and Bill Smoothey. Mr. Ken Russell of Dungog was also a visitor.

Informative talks by these gentlemen were much appreciated by the members of these societies. These talks inspired the six societies around the Richmond River area to consider the formation of a "Far North Coast District Orchid Council". At a meeting attended by two delegates from each society the Council duly came into being.

Foundation office bearers are: President, Mr. Bob Saunders of Casino; Vice-Presidents, Mr. Cec Chalker of Alstonville and Mr. Tom Maxwell of Lismore; and Treasurer, Mrs. J. Hutchinson of Ballina.

The honorary secretary is Mrs. Margaret Smith of 14 Fermoy Avenue, Lismore 2480.

The object of the Council is to create greater goodwill and friendship among growers, and to assist members to improve all aspects of orchid culture.

Right now there is a great need for speakers willing to give talks on orchid growing. Experienced growers passing through the area are invited to contact the secretary well in advance so that a get-together can be organised at a time to suit the speaker.

REGIONALISM A GROWING FORCE

Ever since the formation of the Tropical Queensland Orchid Council about twelve years ago the advantages of regional groups has been apparent. The T.Q.O.C. has proved an outstanding success. There are now five such Regional Councils in Australia and the trend is so important as to warrant a special study. To this end it is proposed to devote a special issue to them in 1988. The successful ideas in one area can possibly be of use to another. Readers are invited to send their comments.

TROPICAL QUEENSLAND ORCHID COUNCIL

This year the Annual Conference was held at Mt. Isa, with the Mt. Isa Orchid Society as the Host Society. It took place over the weekend of 11 and 12th June.

Patron of the Council, Mr. Frank Slattery, and Mrs. Slattery travelled up from Sydney to be there as they have to all previous T.Q.O.C. Conferences over the last eleven years.

Representatives from eleven North Queensland Societies attended, including folk from as far away as Bowen and Mackay.

Lectures included one by the Rev. Ron Collins on the Australian Orchid Foundation expedition to the Iron Range, and another on flower arrangement by Mrs. Jean Slattery.

Visits were made to Mt. Isa collections and there were very fine indeed. The first was to that of Mr. and Mrs. Jim Buchecker of Riverview Terraces, then to Mr. and Mrs. Bernie Worlein of 11th Avenue. Then to the collection of Mr. and Mrs. Charlie Ludwich, and then to Mr. and Mrs. Richard Clark of 9th Avenue who tend to specialise in vandas and oncidiums.

A visit to the mines followed and a tour of the city sights.

Saturday night was devoted to the Conference Dinner, speeches and the presentation of prizes. On Sunday the Annual General Meeting of the Council took place. After a splendid lunch visitors were taken to see Lake Moondarra.

The continued success of the T.Q.O.C. is an indication of the value of regional groupings. One could fail to enjoy a weekend like that.

NEW ZEALAND SHOW DATES

Poverty Bay-East Coast O.S. SPRING SHOW. 16th Sept. and Sat 17th.

Wairarapa Orchid Circle. SPRING SHOW. Marton Town Hall, Fri. 30th Sept. to Sun. 1st Oct.

Hawke's Bay Orchid Society. SPRING SHOW. John Ambulance Hall, Southland Rd., Hastings. Friday 14th Oct. 1 to 8.30 p.m., Sat. 15th 10 a.m. to 8 p.m., Sun. 16th 11 a.m. to 3.30 p.m.

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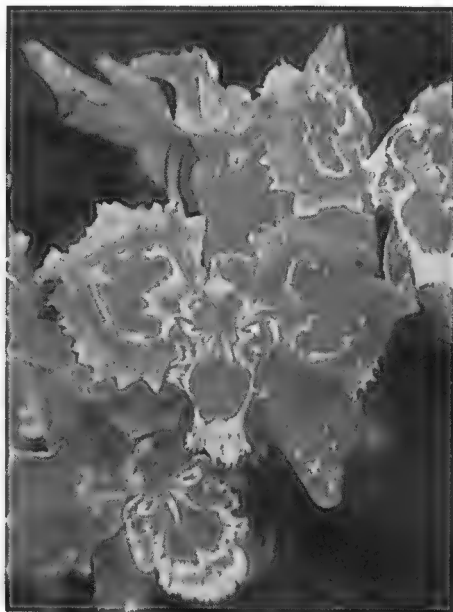
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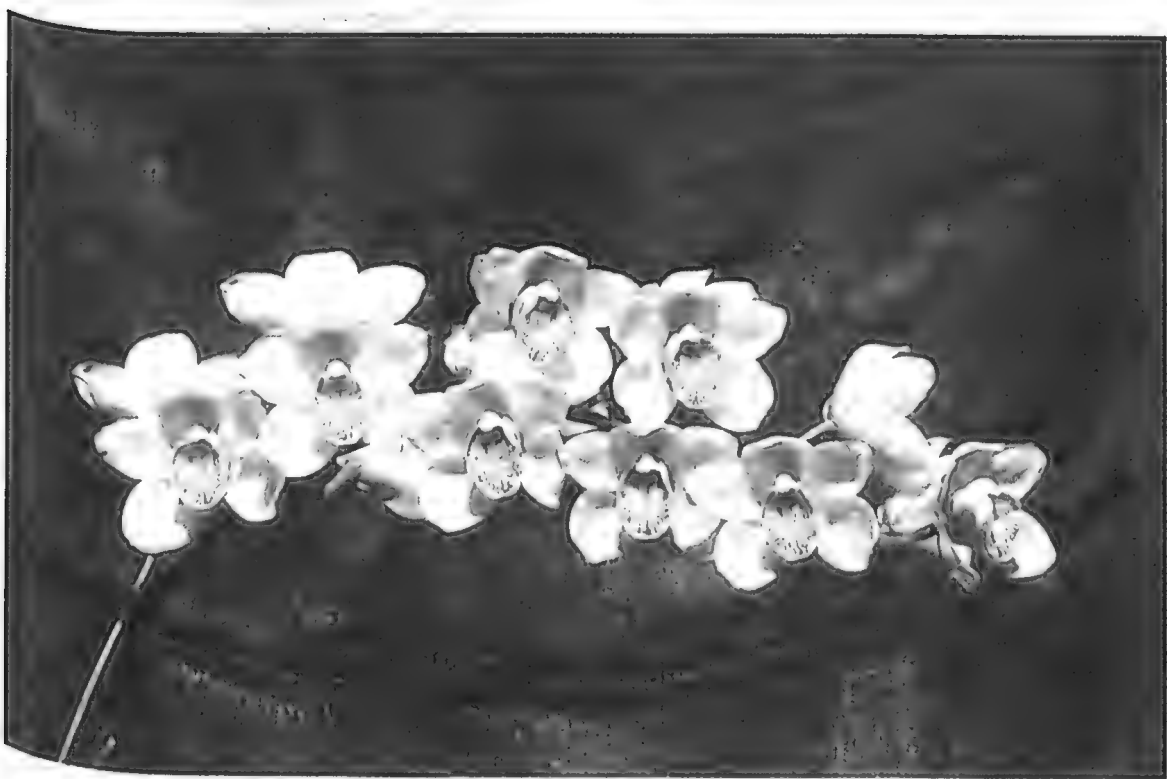
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PUBLISHED QUARTERLY

Volume 42, No. 4

\$1.50

December, 1977



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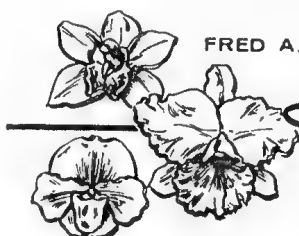
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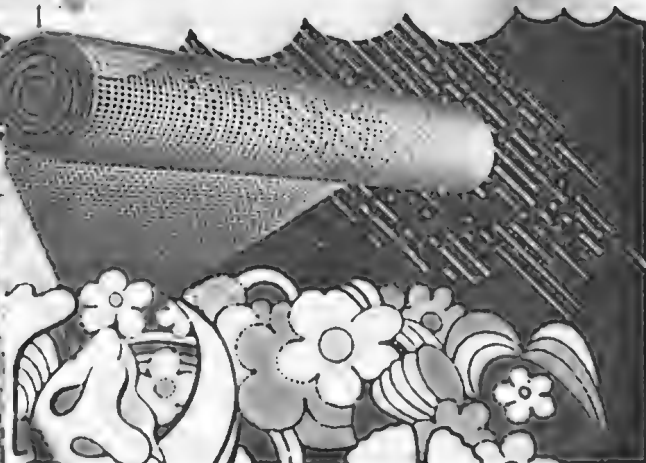
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Catasetum	new species	\$12.00		soderoi	\$15.00
	oerstedii	\$12.00		strobilii	\$15.00
	saccatum	\$12.00		triangularis	\$12.00
	warscewiczii	\$12.00	Miltonia	(spectabilis)	\$12.00
Cattleya	bicolor	\$12.00		(moreliana)	
	granulosa	\$10.00			
	maxima	\$15.00	Odontoglossum	cordatum	\$10.00
Dendrobium	farmeri	\$9.00		citrosimum	\$10.00
	farmeri albiflorum	\$10.00		maculatum	\$10.00
	formosum giganteum	\$10.00		oerstedii	\$12.00
	gratitissimum	\$10.00		schlieperianum	\$15.00
	jamesianum	\$10.00	Oncidium	barbatum	\$12.00
	moschatum	\$10.00		blanchettii	\$12.00
	pieradii	\$10.00		cheirophorum	\$10.00
-Helcia	sanguinolenta	\$12.00		excavatum	\$12.00
-Hexisea	bidentata	\$15.00		harrisonianum	\$12.00
Laelia	bradei	\$12.00		jonefianum	\$12.00
	briegerii	\$12.00		marshallianum	\$15.00
	caulescens	\$12.00		sarcodes	\$12.00
	cinnabarina	\$12.00		spilopecrum	\$12.00
	crispa	\$15.00		splendidum	\$12.00
	crispilabia piedade	\$15.00		tigrinum	\$10.00
	escalqueana	\$12.00		varicosum	\$15.00
	filedensis	\$12.00		wentworthianum	\$10.00
	flava	\$12.00	Peristeria	elata	\$12.00
	grandis	\$18.00		laeta	\$12.00
	harpophylla	\$12.00	Paphiopedilum	barbatum	\$12.00
	itambana	\$12.00		concolor	\$12.00
	jongheana	\$30.00		exul	\$12.00
	lundii	\$15.00		fairrieianum	\$9.00
	majalis	\$10.00		glaucophyllum	\$12.00
	ostermayerii	\$12.00		javanicum	\$12.00
	perrinii	\$15.00		sukhakulii	\$12.00
	purpurata	\$15.00		tonsum	\$12.00
	pumila	\$15.00		venustum	\$10.00
	regina	\$12.00		villosum	\$12.00
	rupestris	\$12.00	Sarcochilus	unguiculata	\$15.00
	tenterofa	\$15.00	Stanhopea	cirrhatta	\$15.00
	xanthina	\$15.00		ecornuta	\$10.00
Lycaste	brevispatha	\$12.00		occulata	\$10.00
	denningiana	\$15.00		wardii	\$10.00
	dyeriana	\$15.00	Tricopilia	coccinea	\$15.00
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	leucantha	\$15.00		tortilis	\$9.00
	macrophylla	\$15.00			
	reichenbachii	\$15.00			

Plus many more of too few to list. Write for our complete catalogue.
A charge of \$2.00 is made for packing and \$1.00 for Health Certificate
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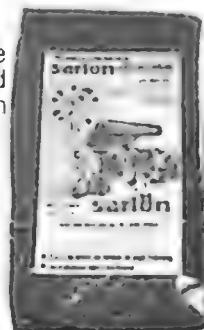
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Sarlonshade: Plants and flowers grow better under Sarlonshade as it controls shade, reduces evaporation, minimises hail and frost damage and mists the rain. Sarlonshade is a tough, yet lightweight woven fabric, designed to give long lasting outdoor protection. Sarlonshade is inexpensive and simple to use. 5 degrees of shade – 32%, 50%, 70%, 80%, 92%.

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Sarlonshade is available by the metre 183cm wide, prefabricated covers or in handy carry packs 3m or 6m x 183cm.



For further information contact Sarlon in your state.

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SOME NEW RELEASES

from our new 1977/78 Catalogue

SEEDLINGS IN 2" POTS AT \$2.00 EACH

- 1219 CATASETUM PILEATUM x OERSTEDII**
This is going to be very interesting as we have crossed the large flat *C. pileatum* with one of the 'Helmet' types. Colour will be in the green tones. Autumn flowering. Warm.
- 1161 DENDROBIUM (ANNE MARIE x FIONA) x ADELE FORTESCUE**
Prospects here are for good yellows of fine form. Spring.
- AB97 ONCIDIUM LANCEANUM x SELF**
A selfing of a particularly fine clone. Flowers large, fragrant, sepals and petals yellow, shaded with green, spotted with chocolate brown, lip rose purple. Warm grower. Summer.
- 1236 PERISTERIA ELATA x SELF**
A robust-growing plant with leaves 2 to 3 ft. high. Spike to 6 ft. with many 3" waxy white flowers. An endangered species. Warm grower.
- 1180 STANHOPEA ECORNUTA x WARSCIEWICZIANA**
This one will be warm growing in a shady position. Medium sized pale yellow flowers in late summer.

NEW CATTLEYA MERICLONES AVAILABLE IN SIZE B = 4" TALL

- | | | |
|---|---|---------|
| DGO LC. DORSET GOLD 'ORCHIDHURST' AM/RHS | Vivacious yellow. Dark purple lip | \$12.00 |
| KA BLC. KEBIR 'LA TUILERIE' | A prolific Spring flowerer. Medium lavender with very deep purple fringed lip | \$8.00 |
| AGO LC. AMBER GLOW 'OLAA' AM/AOS | Beautifully shaped flowers of pure deep yellow with contrasting velvety lip. Very heavy substance. Autumn | \$12.00 |

FREIGHT and any D.P.I. Inspection Charges will be billed separately.

SEEDLINGS —

We can now offer a very wide range of orchid seedlings in most genera including:—

CATTLEYA — CYMBIDIUM — VANDA
DENDROBIUM — ONCIDIUM — PHALAENOPSIS

Price lists will be sent on request

MACKINNEYS' NURSERY

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Closed Sundays

Phone: 345-1916

ODONTOGLOSSUM SEEDLING FLASKS

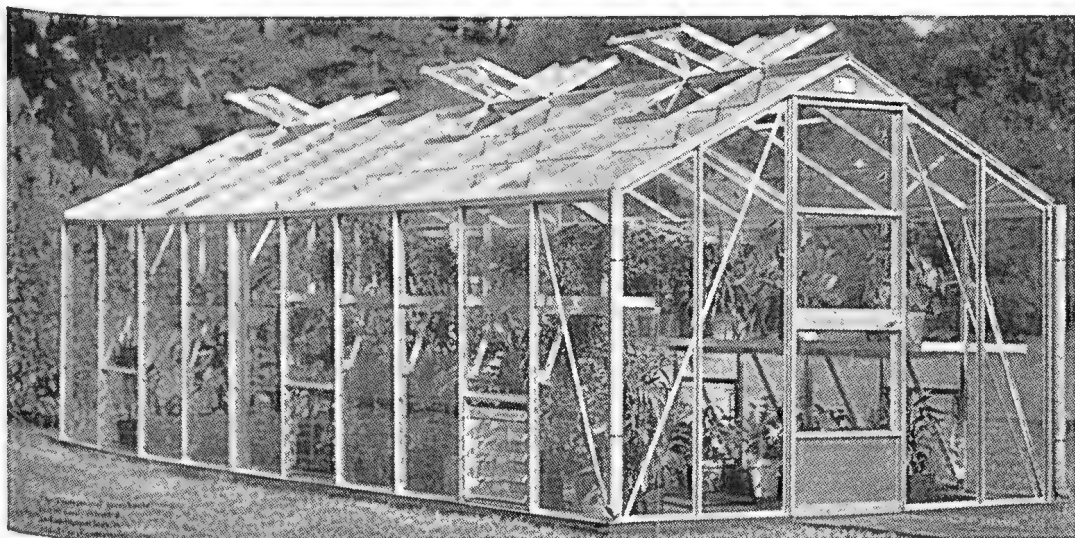
Mr. Gerald McCraith has hybridised some of his best *Odontoglossums* and flasks of seedlings from these crosses will be available in February, 1978. Send for list now.

ALL PROCEEDS GOING TO THE AUSTRALIAN ORCHID FOUNDATION.

These flasks will also be available from Frank Slattery in Sydney and Hodgins Orchids in Melbourne.

SUCCESSFUL NURSERYMEN ALWAYS USE A GLASSHOUSE

WHY NOT FOLLOW THEIR EXAMPLE AND BUY A BACO?



- The BACO glasshouse is manufactured by the British Aluminium Company. It is built like a watch. You assemble it yourself one sunny weekend from a kit with glass already pre-cut to size.
- It has a long-life guarantee; aluminium never needs painting.
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BACO and Cambridge glasshouses are well worth looking into

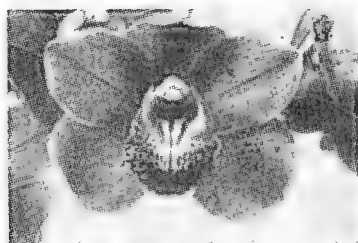
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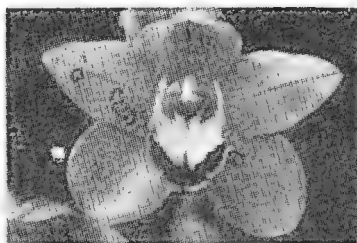
53 WATTLE AVENUE, HOVE, SOUTH AUSTRALIA 5048

Telephone: (STD 08) 296-8602

Please telephone prior to visiting (weekends only)



Hamsey 'The Globe'
AM/RHS



Hamsey x Wallara
'Hove'



Harry Shepherd
'The Prize' HCC/AOC

We are pleased to be able to offer for your selection, flasks of cymbidium seedlings (each containing approximately 25 plantlets); all of which we intend to grow on for our own cut flower market and future showbench winners.

The use of colchicine to convert the ploidy of already known clones and seedlings in their protocorm stage is now well known. However, on checking the offerings being made throughout the world, very few nurseries appear to be offering these colchicine-treated seedlings for sale. The use of colchicine is going to create many beautiful converted tetraploid clones in the next four to five years which we feel, of necessity, will surpass their diploid parents in most departments.

The flask crosses offered are set out below with the price per flask also indicated. (N.B.: freight extra). Flask orders will be received on one-third deposit. Delivery of the flasks will be between December, 1977 and May, 1978 for most crosses.

FLASKS AVAILABLE

- N.B.: The letters '+C' indicate that the seedlings have been colchicine-treated.
- | | | |
|------|--|---------|
| 762 | KATHY LOVELL 'YOWIE BAY' x WYANGA 'KADO' | +C \$50 |
| | 100 per cent pure colours in August, with fine labellums. | |
| 763 | KATHY LOVELL 'YOWIE BAY' x ZUMA BOYD 'YOWIE BAY', AM/AOS | +C \$65 |
| | Showbench July/August greens and yellows expected of good shape. A percentage could be pure colours. | |
| 764 | WYANGA 'KADO' x SLEEPING NYMPH 'HOVE' | +C \$50 |
| | 100 per cent July/August green pure colours. Expect high flower count. | |
| 767 | (KEERA x KALANG) 'HOVE' x PEETIE 'STEADFAST', FCC/RHS | +C \$50 |
| | Expected to produce June diploids and tetraploids with high flower count and excellent spike habits of fine form and substance in the pink and green tones. | |
| 768 | (KEERA x KALANG) 'HOVE' x LUNAGRAD 'ELANORA' | +C \$50 |
| | Similar to 767, only this time using Lunagrad as the pollen parent, Lunagrad being the already proven parent. | |
| 769 | (KEERA x KALANG) 'HOVE' x BALTIC 'LEEANNE SESSIONS' | +C \$50 |
| | Expected to produce June pink diploids and tetraploids for show and export and future breeding, in both the diploid and tetraploid forms. | |
| 7611 | LUNAGRAD 'ELANORA' x PEETIE 'STEADFAST', FCC/RHS | +C \$70 |
| | Will almost certainly produce top diploid and tetraploid greens in June, of fine shape and good flower count in both diploid and tetraploid forms. | |
| 7613 | (HAMSEY 'THE GLOBE' x WALLARA 'GOLD NUGGET') 'HOVE' x CLEO'S MELODY 'CANARY' | \$60 |
| | Both tetraploid parents carry good yellow colouration and pleasing form. Expected to produce rare and award-shaped yellows in August and September, with some whites and pinks as a bonus. | |
| 7615 | (HAMSEY 'THE GLOBE' x WALLARA 'GOLD NUGGET') 'HOVE' x HAMSEY 'THE GLOBE', AM/RHS | \$50 |
| | Tetraploids of show bench and award quality in August through to October from pink to burgundy and also a percentage of gold of intense colouration and polychromes of similar colouration. All will be tetraploids. | |
| 7616 | ZUMA BOYD 'BOLD CZAR' x HAMSEY 'THE GLOBE', AM/RHS | \$60 |
| | Green, gold and burgundy tetraploids and some polychromes. Both parents possess excellent labellums and fine form to produce award type cymbidiums. | |
| 7619 | RIO RITA 'RADIANT', FCC/RHS x SENSATION 'CARLINGFORD' | +C \$70 |
| | For high flower count, tall spikes and plenty of colour, this is the cross. Expect many fine pinks and reds. | |
| 7621 | JOYCE DUNCAN 'SUSAN HUGHES', HCC/AOC x LUNAGRAD 'ELANORA' | +C \$50 |
| | July, August and September greens of fine flower count in both diploid and tetraploid form. | |
| 7626 | OISO x SHOWGIRL 'JULIE CHRISTIE' | \$50 |
| | Two miniatures combining, which we expect to produce white, burgundy and pink miniatures of upright spike habit and high flower count. | |

If you wish to receive our full flask catalogue please let us know by providing us with your name and address.

Quantity Discount: (A) Orders exceeding \$200 — 10 per cent Discount; (B) Orders exceeding \$500 — 25 per cent Discount provided payment is received within 20 days of invoice.

Our Guarantee

Featherhill Exotic Plants (formerly Pacific Orchids) make this guarantee to anyone purchasing our cymbidium seedlings.

We guarantee to buy back (in entirety) any clone from our seedling crosses which is awarded by any recognised judging system in the world at the following prices.

Any clone awarded an FCC or equivalent \$500.00 U.S.A.

Any clone awarded an AM or equivalent \$250.00 U.S.A.

Any clone awarded an HCC or equivalent \$150.00 U.S.A.

If the clone awarded is a diploid (proven by cytology) we offer double the above prices.

Of course we will be pleased to make an offer for *divisions* of any clones from our crossings that are awarded and would welcome details of these outstanding cultivars as they appear.

Our listing of colchicine-treated seedling flasks will be available shortly.

FEATHERHILL EXOTIC PLANTS

2233 Featherhill Road, Santa Barbara, California 93108 U.S.A.

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Phone 84287 Papakura

IMPORTED MERICLONES

FROM VACHEROT AND LECOUFLE — FRANCE

Sizes: C—6" tall, D—2 years from flowering, E—1 year from flowering, F—flowered plants.

AND-SLC. ANZAC 'DORIS' AM/AOS — luminous deep red	Size E	\$26.00
AGO-LC. AMBER GLOW 'OLAA' AM/AOS — another exceptional variety of Amber Glow	Size B/C	\$17.00
AWF-BLC. AMI WAKASUKI 'FORTUNE' AM/TOS — deep colouring and remarkable shape. Size B/C	Size B/C	\$15.00
ATN-LC. ATALA 'NONNETTE' — splendid purple	Size E	\$24.00
BC-BC. BALADIN 'DENTELLE' HCC/AOS — huge beautiful white	Size F	\$40.00
CB-LC. CALANDAL 'HENRIETTE LECOUFLE' — superb magenta	Size E	\$26.00
CP-LC. CONSUL 'PHILIPPE' FCC/RHS — colossal purple flowers of round shape, overlapping petals, with a slight touch of yellow in the throat of the lip	Size D	\$18.00
DP-BC DEESSE 'PERFECTION' HCC/AOS — perfectly shaped white	Size F	\$30.00
DMS-LC. DAUMESNIL 'LA TUILERIE' — deep purple, huge	Size C	\$15.00
EXT-SLC. EXTASE 'BOISSY' — apricot with crimson lip and yellow throat	Size D	\$24.00
GIT-LC. GITANA 'INTERMEZZO' — brilliant purple; dark lip with yellow in centre	Size D	\$18.00
IF-LC. IRENE FINNEY 'YORK' AM/AOS — outstanding light lavender with strong purple-red with gold throat	Size B/C	\$15.00
HPS-BLC. MOUNT HOOD 'PEPPERMINT STICK' — white slightly tinted with green; white lip with chartreuse throat and light pink-fringed border	Size B/C	\$15.00
CAL-LC. MARCHENOIR 'CALVADOS' — superb deep fuchsia purple with a deeper red on the petal's ribs; solid magenta purple lip	Size D	\$18.00
NBG-BLC. NORMAN'S BAY 'GOTHIC' FCC/RHS, AM/AOS — splendid rose magenta tetraploid. Size F	Size F	\$36.00
NLV-BLC. NORMAN'S BAY 'LUCILLE' AM/FCC/AOS/SM/SFOS — extra heavy substance and outstanding colour	Size B/C	\$15.00
RO-LC. ROCROY 'YVONNE' HCC/AOS/SM/SFOS — huge perfect lavender	Size F	\$36.00
SIC-LC. SIROCCO 'BOISSY' — remarkable size and shape, good substance and deep colours. Size D	Size D	\$24.00
TEL-LC. TELSTAR 'SUPERBE' — deep purple with a crimson lip	Size D	\$24.00

Our Nursery is at Lot 6, Monaro Close, Myola via Kuranda

After leaving Kuranda, continue on the Mareeba Road to the Myola Turnoff. Monaro Close is about 5 km from Turnoff along Myola Road turning left at the Appaloosa Stud sign.

We stock a large range of all types of Orchid.

WRITE for our FREE catalogue and price lists —

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Props. John and Joan Walker

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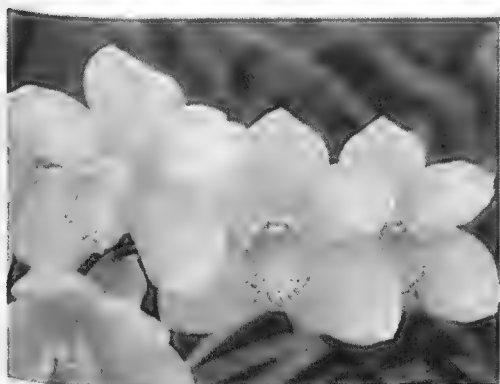
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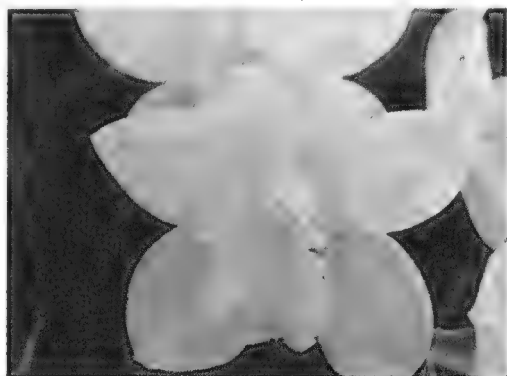
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Monaro Close, Myola
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WHERE PARENTAGE COUNTS



SYLVANIA 'SONNET'

Early pink tetraploid parent throwing superb shape and colour.



PHARAOH 'HIGHLIGHT' HCC

First albino to gain an HCC in Australia (1975).

Our 1978 mailing list will be out shortly. It features Sylvania 'Sonnet' crosses for pinks and reds. If not listed on our mailing list, write now.

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SEED FLASKING — FOR EACH CROSS

Flasks Sown	\$4.00 each (min. two)
Replated Flasks, 50 planted (sowing included)	\$8.00 each (min. two)

- Where flasks used, \$1.00 each or flasks in exchange.
- Service fee for non-germination \$4.00.
- All material returned or destroyed.
- Green pod or loose seed may be posted.
- No forward payment to be made unless requested.
- Material automatically replated unless stated otherwise.

MERISTEM SERVICE

\$75.00 for first 75 mericlones, 50 cents each thereafter.

- Bring over plant by arrangement or post 6" to 14" lead.
- Allow approximately 12 months before return date.
- Chance of success better than 90%.
- No result no charge.
- No deposit required unless requested.
- All material returned or destroyed.

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Jayhurst Orchids Pty. Ltd.

SPECTACULAR RELEASE:

SNOWBIRD 'JAYHURST' HCC/AOS 1977

RECOGNISED AS THE BEST EARLY SHOWBENCH AND EXPORT WHITE YET TO FLOWER.

UNTIL NOW, THIS PLANT, PROTECTED BY 'DEED OF TRUST' HAS BEEN CONTAINED IN OUR OWN COLLECTION, AND WE HAVE NOT PREVIOUSLY AUTHORISED ANY RELEASES.

We are releasing 150 plants only. Each plant will be numbered and each purchaser recorded so that only those few fortunate opportunists who choose to buy, will be authorised to show this clone and mericlone it at will. It has been stated by the largest American importer of Australian blooms that this is the best early flower he has seen come out of Australia.

VITAL STATISTICS:

SHAPE — Excellent.

COLOUR — White-Lip, palest of pink.

SUBSTANCE AND TEXTURE — Excellent (Carries Well).

SIZE — 5¼ inches.

No. of FLOWERS — 16.

HABIT OF SPIKE — Upright, Displays, Flowers Well.

TIME OF FLOWERING — Late June — Early July without heat.

We intend to release these plants simultaneously, therefore you order now — a flowering size plant — Your order and payment will be acknowledged immediately and shipment will be in approximately three weeks.

SNOWBIRD 'JAYHURST' HCC/AOS 1977 IS \$100 PER PLANT PLUS \$4.00 TO COVER AIR FREIGHT COSTS.

WE ALSO HAVE AVAILABLE THE FOLLOWING MERICLONES —

- **VALLEY SONG 'MAUREEN' HCC/NSW**

Good plantlets at \$25.00 each.

- **SABRE DANCE 'WARLORD'**

Intense dark red, large flower, good shape. \$20.00 each.

- **PROFUSION x SANDPIPER 'SUTHERLAND'**

An outstanding large export pink-flowering in October. \$20.00 each.

- **MALANA 'JAYHURST' HCC/AOC/NSW**

Huge plants, some in spike — beautiful yellow showbench. A further release due to popular demand. \$50.00 each.



welcome here

Please add \$4.00 to your order to cover air freight and make any money orders payable at Round Corner, Dural, N.S.W.

THE NURSERY IS NOW OPEN FROM JUNE 1st TO OCTOBER 31st
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Colmanara (Colm.) = Miltonia — Odontoglossum — Oncidium

The following in limited supply

Alcra 4415 Mtssa. Charles M. Fitch x Onc. Ella 'Flambeau' — yellows, large lip. 2"	\$5.50
Alcra 4976 Mtssa. Citron x Onc. macranthum 'Vashon' — long spikes, large petals. 2"	\$3.50
Alcra 5016 (Mtssa. Festiva x Brs. verrucosa) x Onc. oblongatum No. 1. 2"	\$3.50
Alcra 5018 (Mtssa. Festiva x Brs. verrucosa) x Onc. Gold Coin Butte 'Delight'. 2"	\$4.00
Alcra 5856 Mtssa. Citron x Onc. Sultamyre 'Therese' — large flat yellow shirts. 2"	\$4.00
Mtssa. 4982 Mtssa. Citron x Brs. Edvah Loo 'Summer Fun' — buff-yellows, long spike frag. 2"	\$4.00
Mtdm. 4898 Onc. powellii x Milt. schroderana AM-AOS — long spike gold, beige brown. 2"	\$3.00
Onc. 3514 Onc. cuculatum 'Alpine' x Gold Coin Butte 'Sunshine' — yellow-chocolate. 2"	\$4.00
Onc. 4905 Onc. lamelligerum x Serratum 'Vashon' — long spike, large brown flowers. 2"	\$3.50
Beallara Tahoma Glacier 'Mount Rainier' x Odm. Golden Girl 'Buff 'N Brown'. 3"	\$24.00
Schafferara Martha Schaffer — light purples with cream lips. 3"	\$24.00
Odontocidium Tiger Butter 'Pride of Vashon' AM-AOS x Odontiodora Red Knight. 3"	\$24.00
Milt. Royal 'Red Wonder' x Odm. Gledhow — magenta red x large white inter. 3"	\$24.00
Onc. Kutoo x Odm. First Snow 'Vashon' AM-AOS — fragrant light lavenders blooms. 3"	\$21.00
Aspasia epidendroides x Milt. Wm. Kirch 'Lipolani' — starry lavender blooms. 3"	\$16.00
Aspoglossum Copper Butte 'Copper Kettle' x Brassia Rex No. 5 — new exciting cross. 3"	\$32.00
Onc. blanchettii x crispum 'Vashon' — vigorous growers, gold, brown, bronze. 3"	\$25.00

3" Pots One Year to Flowering — Limited Supply

MPSA414 Aspasia epidendroides x Milt. Wm. Kirch 'Lipolani' — tan-yellows-greens, labellum lavender, inter-warm	\$16.00
Odm. 1597 Onc. Kutoo x Odm. First Snow 'Vashon' HCC-AOS — flowers 1½", lavender frag.	\$26.00
Odtna. 1469A Milt. Royal 'Red Wonder' x Odm. Gledhow — red x white inter. 3"	\$30.00
Wils. 1367 Odcdm. Tiger Butter 'Pride of Vashon' x Odtna. Red Knight 'Dark Knight' — dark black red x yellow-brown, cool inter.	\$24.00

PHALAENOPSIS

Phal. Cinnamon Candy 'Raspberry Sherbert' x amboinensis 'Vashon' — sunset colours. 2"	\$4.00
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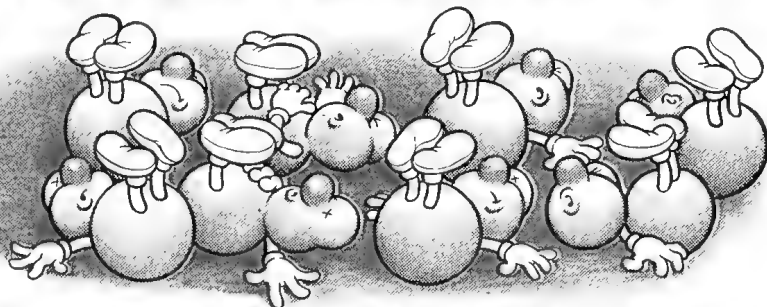
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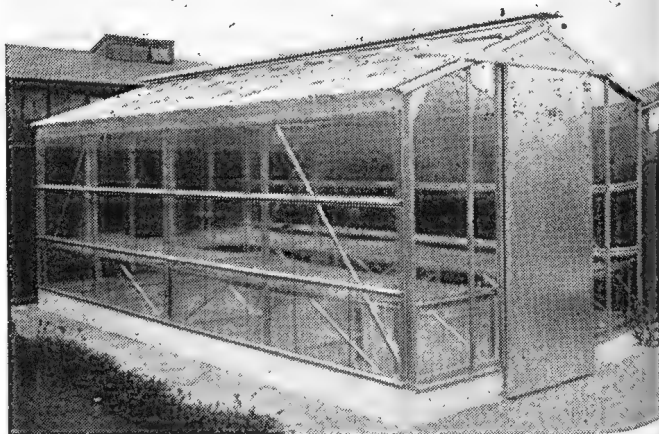
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VOLUME 42

No. 4

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COVER STORY

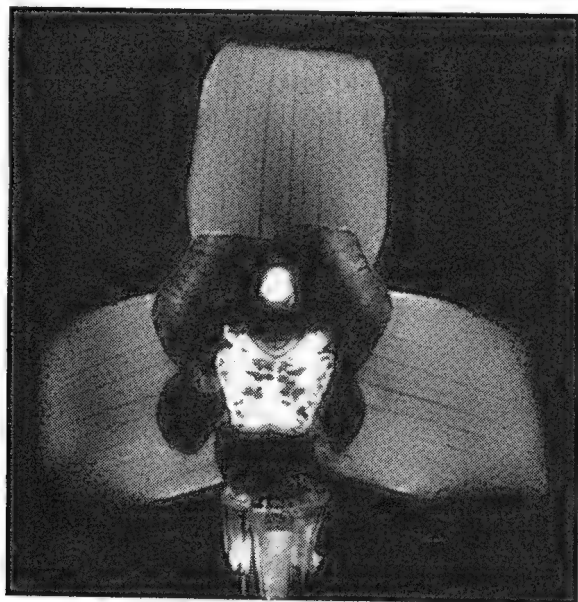
Every year the judges of all States select from the Awards of the Australian Orchid Council the most outstanding plant as Orchid of the Year. This year *Cymbidium Noarlunga 'Enfield'*, AM/AOC-OCSA earns that honour for Mick Ryan Orchids.

Australia's Top Orchids

The Australian Orchid Council top awards for the year are determined by the judges of all States, and ratified at the A.O.C. Annual General Meeting which, this year, was held in Perth at the Fifth Australian Orchid Conference.



Australia's Orchid of the Year is *Cymbidium* Noarlunga 'Enfield', AM/AOC-OCSA, as pictured on the front cover. This fine plant had a semi-arching stem 1.25 m long carrying 15 flowers well above the foliage. Flower width across the petals was 112 mm. The plant was grown by Mick Ryan Orchids, and is a clone of the cross *C. Mary Ann* 'Simplicity' x *C. Southborough* 'Green Meadow'.



Lycaste Kooleena 'Tracy Kim'



Lycaste Kooleena 'Tracy Kim', HCC/AOC-TOS. This is a plant which Mr. and Mrs. C. Nicholas of Hobart have flowered extremely well on several occasions but which only recently was nominated for a Federal award. It was illustrated in colour in the June 1974 issue of "A.O.R.". Colour is an intense red-purple that glistens, with a touch of white in the labellum. When awarded the plant had three well displayed firm-textured flowers and one bud.



Rhy. Wong Yoke Sim 'Gloria'



Rhynchovanda Wong Yoke Sim 'Gloria', AD/AOC-QOS. Earned the title "Award of Distinction of Year". It carried two spikes of 13 and 14 fully open flowers, all with equal segments. The colour was an intense violet-purple, very striking and not previously seen in a vandaceous orchid. Parent plants are *Rhy.* Blue Angel and *Vanda* Rothschildiana. Owned by Mr. Brian Pearce.



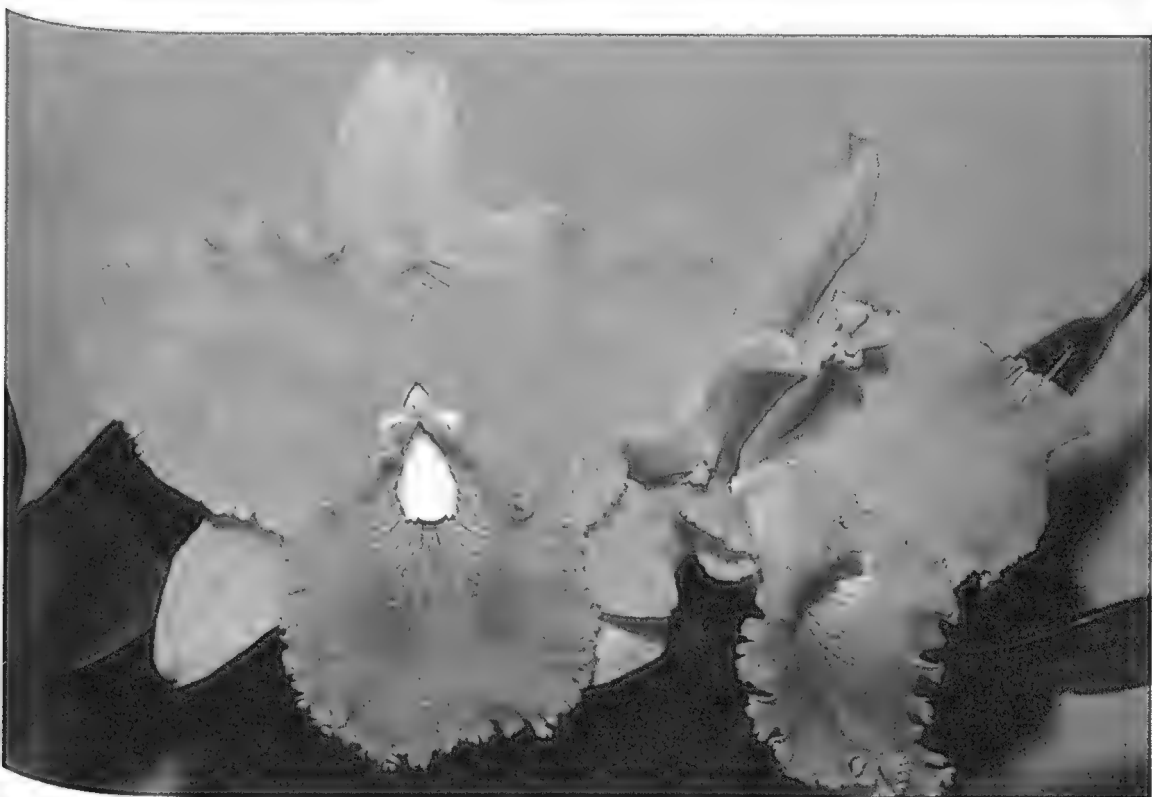
Blc. Lucky Strike 'Joyce', HCC/AOC-OSNSW was the best of the year in the cattleya alliance. Mr. H. C. Sheaves flowered this fine *Brassolaeliocattleya*. It is a cross of *Blc.* Crispin Rosales and *Lc.* Bonanza.



Paphiopedilum Miraleste 'Mt. Lofty Anna', HCC/AOC-OCSA. Failure to attract the necessary 28 points (80%) for shape cost this regal flower an AM by a narrow margin. The glistening flower had a high degree of gloss and stood erect well above the foliage. Parentage: *P. Bellas* x *P. Lucid.* Owned by Mr. and Mrs. Auliciems.



Euanthe sanderana 'Barbara', HCC/AOC-QOS. This beautiful clone of a splendid species was raised by Mr. C. Schneider. The strong spike was held erect with flowers well spaced. It is best flower in the vandaceous alliance.

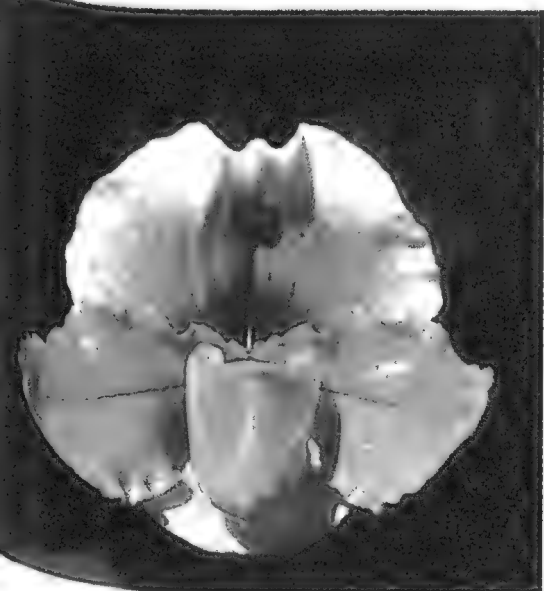


The year's top orchids

▲ *Blechnum* Lucky Strike 'Joyce', HCC/AOC-OSNSW.
Best Cattleya Alliance. Owned by Mr. H. Sheaves.

▶ *Euanthe sanderana* 'Barbara', HCC/AOC-QOS.
Best of vanda alliance. Owned by Mr. C. Schneider.

▼ *Paphiopedilum* Miraleste 'Mt. Lofty Anna',
HCC/AOC-OCSA. Finest of the genus *Paphio-*
pedilum. Owned by Mr. and Mrs. Auliciems.



CHROMATOGRAM OF CYMBIDIUM ALBINO LEAF EXTRACTS



FIGURE 2 R. Shannon CSR Limited

¶ Numbers in left column below refer to chromatograms above left to right. See text.

TABLE 1

Clonal and Leaf Chemical Data of Cymbidium Hybrids

¶	Name		Flower Colour**	Standard/or Albino	Phenolic Acid
	Registered	Varietal			
1	Sleeping Beauty	Emerald Pendant	Green	Albino	Δ
	" "	Eureka	Yellow (pale)	Albino	—
2	" "	Sarah Jean	White	Albino	+
	" "	Molten Gold	Yellow	Albino	—
3	" "	Vivid	Yellow (lime green)	Albino	++
	" "	Concolour*	White	Albino	Δ
	" "	Concolour Green*	Green	Albino	—
4	" "	Concolour Yellow*	Yellow	Albino	—
	Durham Castle	Brilliance	Yellow/white	Albino	Δ
5	Wyanga	Elanora*	Green	Albino	Δ
6	Sensation	Maria*	Red	Standard	—
	Sleeping Beauty	Green*	Green	Standard	—

* Leaf material supplied and verified by Mr. C. Blackstock, Lane Cove, N.S.W.
Other leaf material supplied and verified by Mr. A. Bryant, Kurnell, N.S.W.
** All flowers have yellow markings on the lip.
— Phenolic Acids (absent); + Phenolic Acids (weak); ++ Phenolic Acids (moderate); Δ Phenolic Acids (strong).

Leaf Phenolic Acids as Chemical Markers for *Cymbidium* Floral Albinoism

ABSTRACT

Although the use of leaf phenolic acids as chemical markers indicates that floral albinoism observed in cymbidiums is more complex biochemically than the simple albinoism typified in *Antirrhinum majus* (snapdragon), the technique may be useful for predicting the potential of new cymbidium seedlings to produce albino flowers some 2-3 years before flowering occurs.

by

Peter Smith, B.Sc., C.Chem., M.R.I.C.
and

Nancy Paton, B.Sc.

CSR Research Laboratories

28 Barcoo Street

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INTRODUCTION

Interest has centred on the composition of flavonoids of orchid flowers because of their contribution to floral colours¹ and to the chemotaxonomy of the Orchid family². Anthocyanins have been the main class of flavonoids studied to date since these are an important class of sap soluble pigments in orchid flower colour. Until recently, little or no research has been done on orchid leaf flavonoids and their biosynthetic precursors, phenolic acids, for genetic investigation of orchid flower colour. Since the flower is a modified leaf, one would anticipate that some of the genetic information relating to flower colour would also be found in the leaf.

A study of leaf phenolic compounds (i.e. flavonoids and phenolic acids) offers some practical advantages to the orchid breeder. Sufficient leaf material is available from one year seedlings in breeding experiments for making some predictions on possible floral colours. Normally, the orchid breeder will have to wait 3 to 4 years for his new plant to produce flowers so that he can assess this critical characteristic.

In this paper we report tests which evaluate the use of leaf phenolic acids as chemical markers to predict floral albinoism in *Cymbidiums*. An albino flower is defined as one which lacks anthocyanins but has other classes of flavonoids present. The floral anthocyanin pigments are pink to red to mauve, and in the presence of sunlight polymerise to form brown material of high molecular weight. This is referred to as "staining". Albino *Cymbidium* flowers can be grown outside without "staining". The same phenomenon is observed in the stems of certain varieties of sugarcane.

We stress that this paper should not be regarded as a comprehensive study but rather an introduction to promote interest and discussion. Accordingly we have appended the comments made by Professor W. Bertsch and Mr. A. Bryant following their review of this paper. More exhaustive studies are currently being done by British and Swedish chemists on the composition of leaf phenolic acids in wild orchids.

RESULTS AND DISCUSSION

Before presenting the results of our examination of orchid material some simplified ideas on the current concepts of flavonoid biosynthesis are given for the better understanding of the significance of our data.

Biosynthesis of flavonoids and related compounds
Most authorities^{3,4} agree that all flavonoids come from a single starting material or precursor. The latter is chemically described as a cinnamic acid,

which is a particular type of phenolic acid. A simplified scheme is outlined in Figure 1 for the biosynthesis of 3, 5, 7, 3', 4' pentahydroxy flavonoids. This is only one of many flavonoid types. It should be stressed that there are earlier steps involved in the formation of cinnamic acid but it is not necessary to discuss these here. Again we should stress there are many cinnamic acid derivatives. We have selected the simplest form of cinnamic acid.

The cinnamic acid is hydroxylated to form the potential ring B of the flavonoid series (step (1)). Ring A is formed by the enzymatic condensation of 3 molecules of acetic acid (step (2)), and in turn combines with the substituted cinnamic acid to form the chalcone (step (3)).

The open chain flavonoid type called a chalcone is thought to be the intermediate in the formation of flavonol (step (4)) and anthocyanin (step (5)) groups of flavonoids.

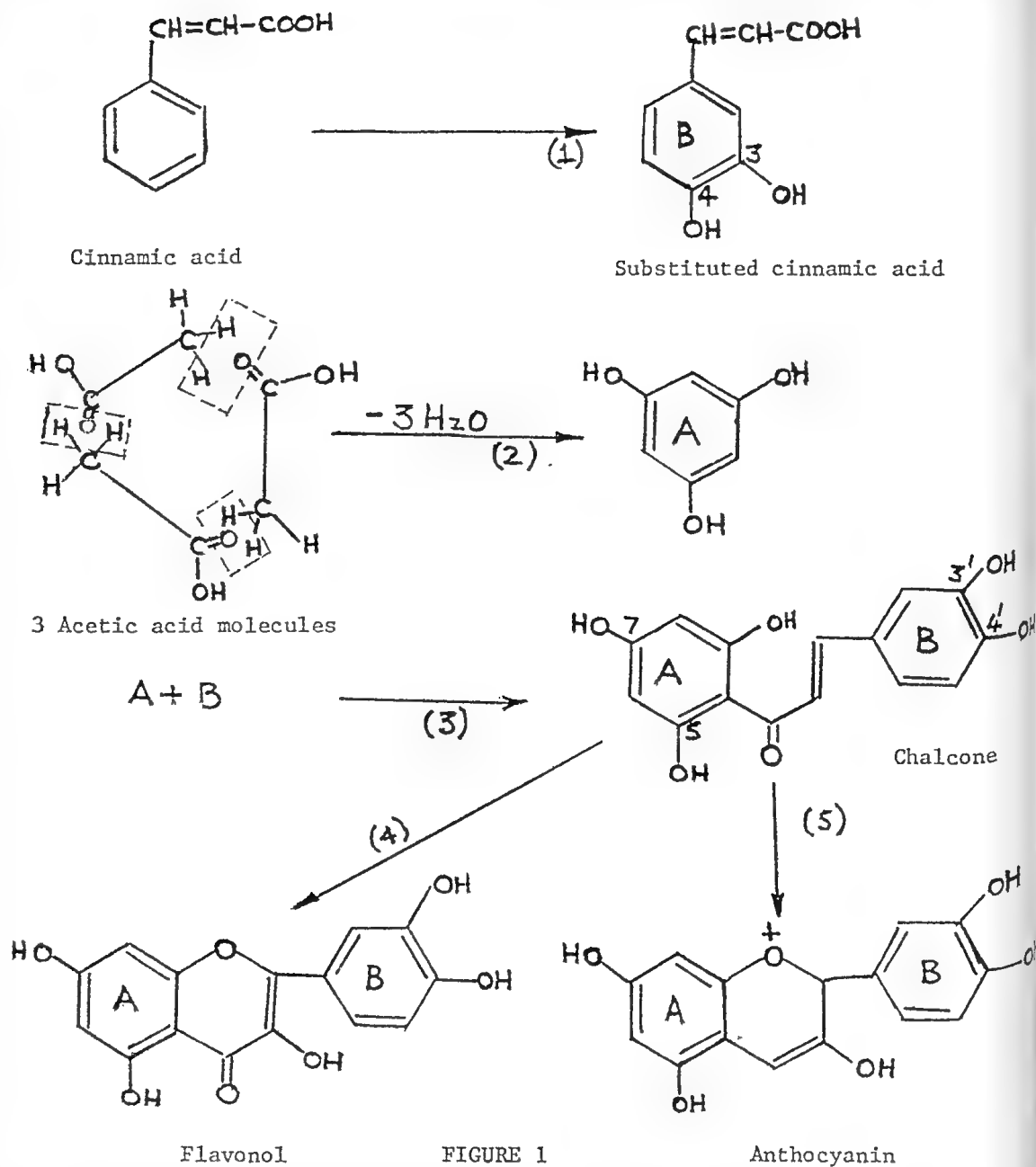
Possible Biosynthetic Pathways in *Cymbidium* Albino Flowers

One would expect to obtain albino flowers (i.e. no anthocyanin) in the following cases according to the above scheme.

- Blockage of step (5) chalcone \rightarrow anthocyanin.** In this situation no phenolic acids will accumulate because these are being utilised in the synthesis of chalcone and flavonol along steps (3) and (4).
- Simultaneous blockage of steps (4) and (5).** Again no phenolic acids will accumulate because these are being used in chalcone formation in step (3).
- Blockage of steps (1), (2) or (3).** This will automatically interrupt steps (4) and (5) with accumulation of phenolic acids. Theoretically, this is the only case where phenolic acids accumulation is linked with albino flowers. However, all plants examined have yellow pigments in their flower (see Table 1). It is possible that this yellow colour could be due to carotenoids or other non-flavonol pigments. Identification of the flower yellow pigments is necessary for a better understanding of this biochemical pathway.

Chemical Analysis of *Cymbidium* Clones

The leaf phenolic components (i.e. flavonoids + phenolic acids) of ten albino and two standard forms of *Cymbidium* hybrid were extracted by techniques described below. The extracted components were separated by thin layer chromatography. The phenolic acid (PA) appears as a light green band at the top of the chromatogram when viewed



in ultra-violet (UV) light (365 nm). These are white in Figure 2 where the leaf flavonoid and phenolic acid components of six *Cymbidium* hybrids are photographed in UV light after spraying the chromatogram with 10% (W/V) sodium carbonate. The dark bands in Figure 2 correspond to the flavonoid (F) components. This is shown below schematically for the *Cymbidium* clone Wyanga 'Elanora'.



Relationship of Phenolic Acid Accumulation to *Cymbidium Albinoism*

The clonal and chemical information of the *Cymbidium* hybrids is given in Table 1. The data shows that 6 out of 10 *Cymbidium* albino forms accumulate phenolic acids in their leaves indicating that albinoism is achieved by interrupting step (2) or earlier steps. The remaining clones have avoided the synthesis of anthocyanins presumably by bypassing step (5) and utilising pathways (3) and (4).

It is evident that *Cymbidium* albinoism is more complex than true albinoism observed in *Antirrhinum majus* (snapdragon). In this species Geissman and Harborne⁵ showed that the albino mutant fails

to synthesise all flavonoids and accumulated their precursors, namely esters of cinnamic acid (phenolic acid). Research workers in the U.K. and Sweden are studying the structures of leaf phenolic acids in the orchid family. Eventually, this work will lead to the identification of phenolic acids associated with *Cymbidium* albinism. From a biochemical viewpoint it would be more correct to define *Cymbidium* albinism as anthocyanin absent (AA).

We can conclude that the chromatographic technique is useful as a fail/safe method for predicting a "chemical strain" of *Cymbidium* albino flowers. Had we detected accumulation of phenolic acids in leaf extracts of standard *Cymbidiums*, the method would have been worthless for albino prediction.

FIGURE 2 CHROMATOGRAM OF CYMBIDIUM ALBINO LEAF EXTRACTS

(See page 184)

Experimental Procedure

The leaves were wiped clean, cut across into $\frac{1}{4}$ " strips, then finely shredded. The shredded material was weighed and extracted several times with hot methanol. The extracts were combined and concentrated at 45°C under vacuum. The concentrate was centrifuged to remove most of the chlorophyll. The remaining chlorophyll was removed by extractions with low boiling petroleum ether. Finally the methanol phase was concentrated under vacuum to a volume proportional to the original weight of leaves.

The flavonoid extract was developed by one-dimensional chromatography with the solvent butanol:acetic acid:water (4:1:5 upper phase). The

SIXTH AUSTRALIAN ORCHID CONFERENCE

This conference, to be held in Hobart with the Tasmanian Orchid Society as the Host Society, is just two years away. It is scheduled for early October, 1979.

The Tasmanian Orchid Society started organising two years ago and fund raising has been a special activity. At last account the special Conference Account stood at over \$1,000.00.

October is spring flush time in Tasmania and most of the stones of its intriguing history are still intact. You have ample time to organise now to make Tasmania a pleasant part of your personal history.

phenolic acids were detected by spraying the chromatogram with 10% W/V sodium carbonate solution.

Comments by Professor W. Bertsch (City University of New York); yellow pigments in Cymbidiums albino flower

"If the yellow colour present in the albinos which accumulate phenolic acids are flavonols then you may need to consider further permutation within the flavonol group. Otherwise all the major effects must be (5) plus some further blocks within the flavonol group. Mr. Alvin Bryant thinks "white" or "opaque" may correlate with accumulation of phenolic acids. Could this be limited production of "colourless" flavonols?"

- (1) "I feel that the yellow pigments present in the flowers should be shown spectrophotometrically to have absorption spectra unlike flavonols".
- (2) "I also feel an equal number of anthocyanin containing ("standard") clones should be tested — two could be by chance. Remember, every clone has yellow in the lip".

Walter Bertsch, Prof. of Biology,
Hunter College of City University New York

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- 5 Geissmann, T. A. and Harborne, J. B. (1955). Arch. Biochem. Biophys. 55 p 447.

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Growers contemplating importing flasks from overseas, particularly those going to the Ninth World Orchid Conference, should know that Plant Quarantine applies to flasks as well as plants.

Flasks are relatively easier to import than established plants but permission must first be obtained from the Plant Quarantine Service, Department of Primary Industry, in your State.

"As for the fruits of cattleyas which must be reckoned among the largest there are . . . authorities state they may contain anything from three million to five million seeds".
Walter Kupper.

FOR SALE

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ORCHID TRAVELOGUE

Sombathely Cymbidiums

MERVIN AND JEAN DUNN

It is easier to say SOM-BAT-TAY than it is to get to SOMBATHELY. But if you want to visit Europe's most easterly situated model Cymbidium orchid farm you must away to Somabathely. We went: here's how.

Having made plans, late last year, to attend the Cymbidium Society of America's Second Annual Congress at Santa Barbara in March, but in January, faced with nowhere to live until the completion of our new home at the end of March, we decided to visit some of our customers in Europe before catching the Concorde to America. So, loaded with tickets, visas and needles, we set off on a planned 40,000 kilometre — 32 flight — journey to some off-the-tourist-track places.

At times, the best laid plans go astray. At other times, surprising things happen. The first surprise came when we flew directly over our own orchid farm twice on the same day. First time was in an Ansett Boeing 727 to Melbourne. Then, after a very pleasant stay in the "Captain's Club" at Tullamarine, where exactly everything is free, some five hours later in a Qantas "Jumbo Jet" on the way to Teheran via Singapore and Bangkok, we once again flew directly over Valley Orchids, Reynella and our home city, Adelaide. It is time Adelaide had an International Airport.

Twenty-five and a half hours from home, at three o'clock in the morning, local time, we landed at Teheran where for three days we were treated to story book style Persian hospitality. Iran has but two Cymbidium growers — one in Teheran, one on the shores of the Caspian Sea. Both are big by world standards. On to Israel which presently boasts but one Cymbidium farm; a Kibbutz at Efat, some 100 kilometres north of Tel Aviv. However, this bustling country is about to surprise the Cymbidium growing industry in all countries.

After four days in Israel (the fourth as guests of El Al through a cancelled flight) and visits with our host and hostess to Jerusalem, Bethlehem and the Kibbutz, next stop was Rome from where we phoned "our man in Italy", Bruno Gasparini of Trieste. Bruno said, "come to Venice". We flew to Venice.

We spent a full day, nearby, at the Padua "Flower Mart" — an exhibition of horticulture and horticultural products, machinery, etc., made up of 466 exhibitors from almost all European countries, and occupying one hectare of heated hall. Although not open to the public, the hall was crowded all through the day with many thousands of people commercially interested in horticulture — including cymbidium orchids.

By train to Trieste for a planned one day stopover which turned into almost two days due to a cancelled flight, because of fog at Milan? We took the night train to Vienna — 12 hours at speeds up to 85 mph. Later the same day we flew to Budapest to find Customs and Immigration formalities considerably less than expected and much less than at other borders. We stayed at the Duna Intercontinental Hotel on the banks of the Danube in sight of Budapest's seven bridges and many fine castles.

By arrangement, at 7.30 a.m. the next day we were called for by our host and started the 260 kilometre journey by car to visit an orchid growing co-operative.

At 11 a.m. we arrived at Sombathely, in Hungary, between the 47th and 48th parallel of Latitude, 260 kilometres from Budapest, and 10 kilometres from the Austrian border. Visitors are welcome. We were royally entertained by the directors of KERTESZ MTSZ, the co-operative orchid farm. We had come to see how our mericlones were being treated. We were not disappointed. We saw thousands of young plants, each with a very familiar name, growing to perfection in the most luxurious conditions.

KERTESZ MTSZ is a plant nursery, producing, for both export and internal sales, a wide range of flowers and pot plants. It is a co-operative employing some 40 people and occupying 3½ hectares, mostly covered with glasshouses. They have recently bought a further 4 hectares of land which they plan to cover with glasshouses in the very near future. Cymbidium orchids occupy 2,000 square metres of glass-covered flowering area and have reserved for them the same area where the plants spend the summer under shade.

cloth. Cymbidium flower production is to be expanded considerably to cater for the increasing demand as far East as Kiev and Moscow where good sales are presently made.

Our tour of the nursery with Josef Retkes, the obergeringenieur (grower) and Agoston Hegedus the handelsdirektor (finance) and our host from Budapest, showed us a very efficient and supremely tidy nursery. Australian visitors are rarities at KERTESZ MTSZ — we were the first — but work went on as usual for everyone except our guides. The very diverse production in no way downgraded quality: all plants were in superb condition in a well laid-out nursery.

Lunch of venison, mushrooms and many other Hungarian delicacies between samples of the local and renowned Szombathely wines was one of the highlights of the visit. Other memories are the warmth of welcome, the desire to please and the real interest shown in our orchids. Of course, we also enjoyed hearing the advance orders for our cymbidiums and, in particular, confirmation of the sale of 100,000 *Kentia Fosteriana* palm seeds which we had arranged from Australia.

The trip back to Budapest was mostly during the night which, in a way, was a pity because we would have enjoyed once again, seeing the green fields of wheat and ploughed land being readied for the planting of corn. There being no fences, the land cannot be described in the Australian term "paddocks", but the patterns of land use made for interesting travel.

The orchid world is made up of friendly people with one common interest. Country, language, creed, politics, religion; all these are submersed by the great interest of orchid growers in the perfection of their production — the orchids' blooms. Meeting people the world over, overcoming language and communication difficulties, flight cancellations, adopting strange customs and eating strange food; all are compensated for by smiles and laughter and their interest in our orchids and ours in theirs.

Valley Orchids, Pimpala Rd., Reynella, S.A.

A.N.O.S. VICTORIAN GROUP WIN

At the recent Royal Horticultural Society of Victoria Spring Show this active group arranged a splendid display of native orchids. It was awarded a Merit Certificate and the rarely awarded Silver Comedown Medal for an exhibit which one R.H.S. member described as the best display of native orchids he had ever seen.

Back to Darwin 1978

Next year our City is making a special welcome to all visitors, especially those persons who were so kind to us after Cyclone Tracy.

The Darwin Orchid Society will welcome all orchid growers coming to Darwin, who will be given a special welcome and shown around our orchid gardens. If a group should come we will put on a barbecue for you.

Not only have we very fine tropical orchids; there are wild life safaris that can be arranged. A day trip down the Adelaide River will enable you to see hundreds of buffalo, thousands of birds, including Jabiru Storks and Brolgas, not to mention a few crocodiles.

The Society meets on the 1st Monday of each month in different members gardens, so let us know if you are coming.

President: Mrs. R. L. Bromwich, 5 Stirling Place, Darwin 5790; Secretary: Mrs. G. C. Heinemann, 3 Namarluk Court, Ludmilla, Darwin 5790.

SIXTH AUSTRALIAN ORCHID CONFERENCE

Some kind person in Tasmania, but then isn't Tasmania full of nice people, has sent the editor the *Tasmanian Wilderness Calendar for 1978*. It is full of enticing pictures depicting the scenic grandeur of this beautiful island and is the best "come on over for the Sixth Australian Orchid Conference" that one could possibly imagine. Maybe that is why it was sent.

Thank you to whoever sent it. Please write.

The calendar is beautifully printed. It is published by Peter Dombrovskis Pty. Ltd., P.O. Box 245, Sandy Bay Tasmania 7005. Retail price is \$3.95. An ideal gift, particularly to send overseas.

And it really whets the appetite for October 1979. Plan to be there.

FURTHER NOTE ON IRON RANGE EXPEDITION

Detailed evaluation has established that several species new to Australia were collected on this expedition. Two of these were new to science, and five new to Australia. All but two of these are described in *Austrobaileya* Vol. 1 in a paper "Notes on Queensland Orchids 1" by P. S. Lavarack. Of the remaining two species, one remains unidentified, the other is the subject of a paper by Bruce Gray currently in press.

The species described in *Austrobaileya* are *Dendrobium tozerensis* P. Lavarack sp. nov.; *Obe-ronia carnosa* P. Lavarack sp. nov.; *Bulbophyllum leratii* (Schltr.) J. J. Sm.; *Eulophia pulchra* (Thou.) Lindl.; *Taeniophyllum malianum* Schltr.

NAME CORRECTION

On page 163 of the September issue the cross *D. speciosum* x *D. tetragonum* was referred to as *Dendrobium* Hilda Pozon. The registered name is *D. Hilda* Poxon.

MINIS AND MIDIS, TODAY AND TOMORROW

ANDY EASTON

Although there have been occasional hybrids throughout the spectrum of the different small-flowered *Cymbidium* species, the real progress has been made with progeny of the Asiatic species, *C. pumilum* and the Indian species, *C. devonianum*. With the exception of one clone, Peter Pan 'Green-sleeves', bred from *C. ensifolium* hybrids from other Asiatic species have been disappointing. Scent and an early blooming season have not compensated for sparsely flowered spikes, dull-colored flowers, a lack of substance and keeping quality and first generation infertility.

C. suavissimum 'Keith Andrew' CBM/AOS, a summer blooming species is an enigma. Apparently collected from the transition area between Asia and India, it is fertile and has produced the hybrid, Pekoe. Characterised by a tendency to bloom on the previous year's pseudobulb, this trait is also dominant in the hybrid.

Hybridisers also briefly flirted with *C. suave*, *C. canaliculatum* and *C. madidum*. We feel one of the most rewarding crossings of this type was Mrs. Menninge's *C. Kuranda* (*madidum* x *suave*) of which the clone 'Arthur Dawson' received a HCC/AOS in late June, 1976. Here we have a tiny flower carried on long pendulous spikes with the excessive pseudobulbs of the *madidum* parent greatly reduced by *suave*. Possibly of low fertility, it will be converted to a tetraploid in the hope that as a parent it will extend the miniature blooming season and substantially influence flower size.

Little is known about the genetics and ploidy of the *C. pumilum* line. Most of the primary hybrids between *C. pumilum* and standard *Cymbidium*s in the 1950's were infertile. Those clones that did give seed either were unpredictably erratic in their fertility or behaved as polyploids even when both their parents were diploid. Polyploidy in the second and third generation *pumilum* hybrids has meant heavier, rounder flowers with deeper colours and improved keeping quality. Unfortunately there is a long debit side: short spikes intermediate-sized flowers, coarse foliage and larger pseudobulbs. Thankfully the floriferousness that *pumilum* passes

This excellent article on the current trends in miniature and novelty cymbidiums was sent to "A.O.R." by well known New Zealand grower Mr. J. S. Hannah who is a friend of Mr. Easton. It has much of relevance for Australian growers.

to its progeny is apparently a dominant and still exerts influence in hybrids that are three generations removed. We prefer to consider these hybrids as the midi-*Cymbidium*s. They will probably be the future *Cymbidium* of commerce but miniature either in character or by judging standard definition they are not.

We feel one step towards solving the problem is not too far away, maybe just one season from blooming. Dr. Don Wimber, with characteristic foresight, at the time he was converting proven diploid standards with colchicine, also treated *C. pumilum* 'album'. Consequently we now have at point of blooming a tetraploid *C. pumilum* which if crossed to tetraploid standards or intermediates will produce a first generation of miniatures which should all be tetraploid and fertile. One can anticipate selecting and crossing a small-flowered Fred Stewart or Kuranda 'Arthur Dawson' 4n to *C. pumilum* 'album' 4n thus opening up to the enthusiastic hobbyist with space restrictions, an opportunity to grow some truly miniature *Cymbidium*s of the highest quality.

A cross for the future which also intrigues is the possibility of mating another Wimber conversion *C. grandiflorum* 4n to *C. pumilum* 'album' 4n. In the energy cautious days ahead we may see real beauty in orchids that will take night temperatures as low as 32°F on a regular basis.

If we were to graph the number of crosses of *C. pumilum* ancestry which have been registered each year over the past ten years they would show a steady decline. Many of the great miniature *Cymbidium* hybridisers have either restricted or curtailed their activities. Many of the great orchid companies have either changed direction or gone out of business. Presently, the demand for miniature and novelty *Cymbidium*s has never been higher while the supply of good new varieties has never been lower. But growers, hobbyists

and professional, from whom the various judging systems are developed, are telling us they want improvements made. Taller spikes, carried above more modest foliage, smaller pseudobulbs, a complete range of bright colours, a longer blooming season, even scent, are challenges the Cymbidium hybridiser of the 1980's must recognise.

In evaluating hybrids from the *C. devonianum* line we must admit some bias. Currently in great vogue in the U.S.A. and Europe, they have always been our favourites. Unlike the *C. pumilum* line where names like Bowers and Wigelsworth, Emma Menninger, Mary Bea Ireland, Ernest Hetherington, Ayako Tananaka and Paul Miller were the magic catalysts, the name of Keith Andrew stands pre-eminent in the development of present-day *C. devonianum* hybrids. In a cursory evaluation as a parent of miniatures, the broad leaves of *C. devonianum* may seem detrimental. But they soon disappear in hybridisation and anyway they conceal small walnut-sized pseudobulbs which do characteristically dominate for several generations.

There are four outstanding old time *C. devonianum* crosses: Langleyense, Jean Brummitt, Vogelsang and Dingledden which predate even a lifetime orchid grower like Keith Andrew! They have been largely ignored by hybridizers which defies explanation. Langleyense 1911 (x *C. lowianum*) is quite fertile and there are several good crosses coming along from selected clones. Jean Brummitt AM/RHS 1945 (ostensibly x *C. eburneum* but probably a mislabelled *C. Langleyense*) made *C. Coquette* (x *C. Alexanderi*), a most distinctive cross and more recently the S.B.O.E. crossings with Carisona 'Glendessary' and Cariga 'Sorrento' have, on first bloomings, been very promising. *C. Dingledden* 1933 (x *C. Alexanderi*) was used by Dorset Orchids in the 1950's and took us close to blue Cymbidiums in the cross *C. Cinderella* (x *C. Regina* 'Sanguineum'). It was not until the recent Keith Andrew cross with Rincon 'Clarisse' that we heard anything more of *C. Dingledden* AM/RHS.

C. Touchstone 'Mahogany' (*C. Mission Bay* x *C. devonianum*) is probably the most widely awarded *C. devonianum* hybrid in the world. Holding an AM/RHS AM/AOS and gaining the Cymbidium Society "David McLean Award of Distinction" this year. It

appeared infertile until a 1976 pollination with *C. Doris Aurea* 'Cardinal' 4n produced a pod full of seed. Several other fine clones of Touchstone exist, 'Cerise' which made the fine cross *C. Miniatures Delight* at Stonehurst and more recently gave seedlings with *C. Khyber Pass* and *C. Sensation* and 'Janis', probably the finest clone of all, which can only be described as having a navy blue lip.

In first generation hybrids from *C. devonianum* a level of quality is reached among finer clones that is difficult to surpass in future generations. When the cross *C. Bulbarrow* (*C. Western Rose* x *C. devonianum*) was premiered at the B.O.G.A. show in 1976, those of us present felt we were looking at the finest miniature Cymbidiums in the world. Because of their pendulous spike habit the *devonianum* hybrids are non-commercial from a cut flower viewpoint. Maybe this is the secret of their appeal and recent rapid rise to popularity. With pointed rather than paddle-shaped floral parts and sharply contrasting lips, they exude the personality many second and third generation *C. pumilum* hybrids lack. Of course some hybridizers will breed away from the primary *C. devonianum* hybrid and dilute their dominant characteristics. We hope that few would be so blind.

Pacific Orchids, 183 Bar M Drive, Eugene
O.R. 97401



Casino and District Orchid Society

E. MILLER

Mr. Bob Saunders was re-elected president of the Casino and District Orchid Society for 1977. The Society has continued to prosper under his guidance. Mrs. Elwyn Miller is Secretary and Mrs. Robyn Nesbitt our able Treasurer.

A successful Autumn Show was staged at the end of April with Mr. Lionel Frame exhibiting the Champion Orchid of the Show — a lovely Vanda which was also judged Champion for Culture.

Our Spring Show was held in September and the judges, Mr. Basey and Mrs. Graham of Toowoomba, had a difficult task to perform with many quality orchids on display. Bob Saunders exhibited the Champion Orchid of Summerland and the Champion judged for Culture, *Den. densiflorum* x *Den. farmeri*.

A special guest at a recent meeting was Mr. Phil Spence of Sydney who lectured us on orchids of New Guinea and showed many interesting slides.

We have continued with a varied educational programme for members and demonstrations of potting methods by experienced growers have helped our newer and younger members.

The Society meets in the old Bowling Club House in Convent Parade on the fourth Friday of each month at 8 p.m.

Growing *Cymbidium Leodogran* 'Cradlemount', CCC/QOS

LYN AND LEE WILLIAMS

This plant was purchased in August, 1971, as a single bulb mericlone. When Awarded the plant completely filled a 25 cm bucket and had 25 flower spikes, each bearing about 16 flowers.

We grow all our cymbidiums in shade houses and they are brought under a fibreglass roof when in spike. They are grown under Trical mesh, giving about 52 per cent shade. We are fortunate that there is always very good air circulation around the shade house, and very rarely are the cymbidium leaves not moving in the light breeze.

All our cymbidiums are in plastic pots and we put many extra holes in the base of each pot to increase drainage.

The plants grow in a basic cymbidium type mix. This consists of chopped pine bark, hardwood chips, peanut shells, peat moss, styrene foam granules and charcoal. To this we add some blood and bone, dolomite, and superphosphate. Our potting mix is fairly coarse as we sieve out a lot of the finer bark, chips, and charcoal.

In summer we water almost every day and taper off to once or twice weekly in winter. During January and February we damp down the cymbidiums at dusk to lower temperatures and thus help initiate flower spiking.

Water soluble fertilisers are applied weekly. We alternate brands, using both organic and chemical types. In late summer we change to fertilisers with a lower nitrogen ratio.

One factor which is important when growing a specimen plant is to choose a good grower which retains its leaves and grows fast. In this respect *Cymbidium Leodogran* 'Cradlemount' has been most co-operative.

Mt. Cotton Road, Capalaba, Queensland

EDITORS NOTE: *C. Leodogran* is cross between *C. Sweetheart* and *C. Liliana*, registered in 1963 by Paul Miller who helped pioneer the trend to minicymms. Note that the name *Leodogran* is frequently spelt incorrectly. For data on these early miniature cymbidium crosses refer to the September 1966 issue of "A.O.R." in your society library.

GROWING COOL

Mrs. Ruth Rae in "Grafton Orchid World".

Our slide evening with Thailand orchids gave some interesting insights into the cultivation of some species of Thai orchids. It was illuminating to hear, for instance, that *Ascocentrum minutum* needs a drop in temperature below 60 deg. F. to flower successfully. Now at last we may get results by putting it out in the shadehouse in the Spring. *Paphiopedilum villosum* is another species which does not require heat to flower. Unlike most other Thai paphiopedilums this one does not have mottled leaves.

"Never allow insects to get the upper hand, or you will not long continue to grow plants to perfection." Williams Orchid Manual.

Orchid growers who are more than just interested in the growing of the miniature cymbidiums, would no doubt have read the article "Culture of Miniature Cymbidiums", by LYN WILLIAMS, on page 139, September 1976 issue of the A.O. Review.

Lyn and Lee have just received CCC/QOS for two of their miniature cymbidiums. A slide of one is depicted here *Cym. Leodogran* 'Cradlemount' — with details of same, together with further cultural notes on just how they achieved such results.

It must be added, all their cymbidiums are well grown and this proves another point, with proper care and understanding of their requirements cymbidiums can be grown in Queensland as good as those grown in the Southern States.

PHYL COTTON

FINE QUEENSLAND MINICYM

That miniature cymbidiums do well in southern Queensland was proved once again when another Cultural Certificate was awarded to Mr. and Mrs. Lee Williams for their fine specimen plant of *Cymbidium* Gareth. Growing in a 30 cm pot it had no fewer than 35 spikes and an estimated 400 to 450 flowers. So many flowers the foliage was almost hidden.

Cymbidium Gareth is a Paul Miller cross, registered in 1963.

MR. BLOODWORTH'S CYMBIDIUM SWEETHEART

Toowoomba is an excellent area for cymbidiums nevertheless they can do very well around Brisbane as proved by such growers as Mr. and Mrs. Williams and Mr. Jim Mackinney.

Mr. Gordon Bloodworth of Toowoomba has flowered miniature *Cymbidium* Sweetheart 'Piquant' beautifully, but modestly gives most of the credit to the plant. He says, "Not many plants are suitable for growing into large specimens because they produce too many pseudobulbs. This one does not and it has the additional advantage of being a quick grower, so I have decided to pot on into a 25 cm pot for a larger specimen next year."

HOW FAR NORTH WITH MINICYMS?

Some miniature cymbidium crosses are proving more amenable to hot area growing than is possible with standard cymbidiums. Would any grower north of Brisbane kindly report their experience with these interesting plants? "A.O.R." would be pleased to publish details.

WARRINGAL WARRIORS ADVANCE

The Warringal (Heidelberg) O.S. of Victoria is now over fifteen years old. Its lineage can be traced way back to a night at Scots Kirk Hall, Heidelberg when 19 foundation members held the inaugural meeting and elected Mr. Jess Garton as first President.

Today the Society is a very important part of the orchid scene in Victoria and is a very active and happy club. It meets first Friday of the month in the Heidelberg Bowling Club Pavilion. President Mr. J. Curley likes to meet new members and visitors. His phone number is 35-3032.

Outstanding minicymms from southern Queensland



▲ *Cymbidium* Leodogran 'Cradlemount' beautifully-grown by Mr. and Mrs. Williams of Capalaba. See articles in this issue.

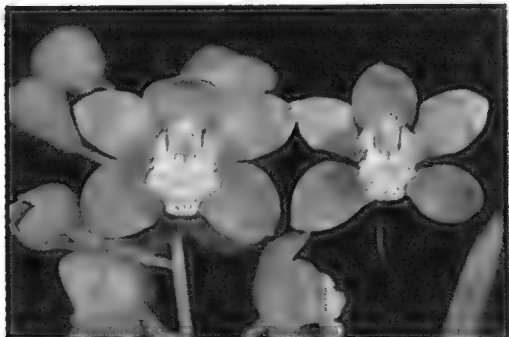
▼ *Cymbidium* Sweetheart 'Piquant' with 12 spikes and 257 flowers growing in a 20 cm pot. Owned by Mr. G. Bloodworth of Toowoomba. See note on opposite page.



NEW STYLE IMPROVEMENTS Y

WHY TETRAPLOIDS?

Tetraploid plants are more bountiful, their flowers are more highly coloured, they are of better shape and are longer lasting. They are superior breeders. The greatest range of flowered tetraploid Cymbidiums anywhere in the world, is in cultivation at Valley Orchids.

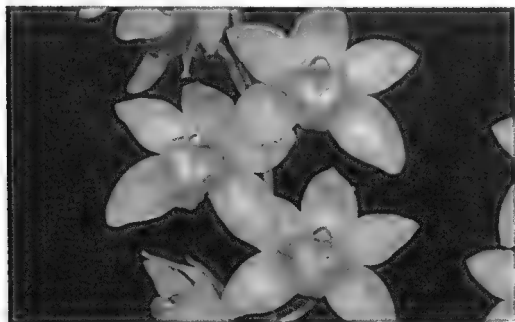


SLEEPING BEAUTY 'SOUTHERN CROSS' (4N) and (2N).

Typical of the difference between the tetraploid and the diploid form of the same orchid. Available in flask V608(4N) \$150.

WHAT IS A TETRAPLOID?

Tetraploid (4N): A plant, the cells of which have double the number of chromosomes (80) compared to the species — diploid (40), 2N. Tetraploid cells are double the size (by volume) of the diploid cells. We determine tetraploids by volumetric measurement of the guard cells found on the undersides of the plant's leaves. The symbol "(4N)" is added after an orchid's name to denote the plant is a Tetraploid and is **NOT**, as would be expected from its breeding, a diploid (2N) or triploid (3N).

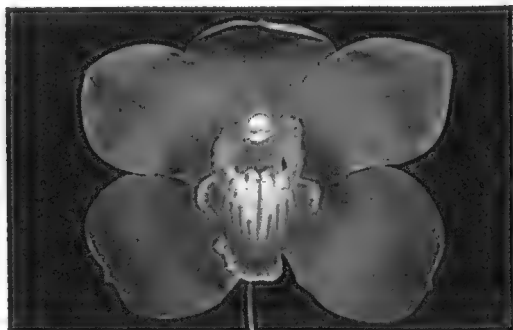


VALYA CRAIG 'JUDY' (4N)

The only known tetraploid from this famous cross-used by us in breeding and available at divisions at \$60 per bulb.

WHAT IS COLCHICINE?

A mitotic poison, derivative of the crocus plant. Used by us to induce tetraploid plants from diploid protocorms.



SENSATION 'MELITA' HCC/AOS.

The diploid form is pictured. Tetraploid Mericlones and Colchicine-treated flasks are listed in our new catalogue.

TETRAPLOID COMPARED TO DIPLOID

Flowers: The tetraploid flower is generally twice the volume of the diploid flower and generally, the tetraploid flower is bigger overall by, say, 10%, the tepals are wider by 20%, the lip wider by 25%, the column by 50%, and the thickness of the tissue of the tepals, lip and column, is increased by 50% or more. Tetraploid flowers are of more intense colour, they are better shape and they last a lot longer on or off the plant.

Plants: Tetraploid plants are generally slower to mature, taking one to two years longer than the diploid to reach full maturity. At maturity the tetraploid plant is bigger and more bountiful than the diploid; its roots are of bigger diameter, its leaves thicker and its bulbs bigger.

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ALL PLANTS SENT FREIGHT FREE WORLD WIDE AND GUARANTEED DELIVERY IN FIRST CLASS CONDITION.

CYMBIDIUMS WITH CAN SEE - TETRAPLOIDS



'LIGHT' HCC/AOS (4N) and
aploid and diploid.

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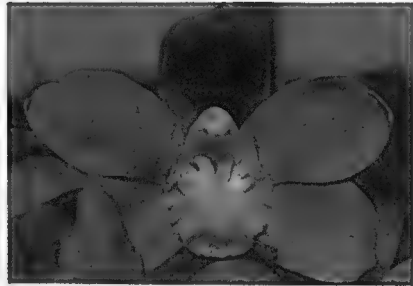
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all colours to flower
whole of the Cymbidium
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ATION AHEAD

FIFTH AUSTRALIAN ORCHID CONFERENCE SHOW, PERTH, W.A. SEPTEMBER, 1977



SLEEPING LAMB 'GOLDEN TETRA' (4N) HCC/AOS.

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VALLEY ORCHIDS, for the third consecutive time, were the most successful exhibitors of Cymbidiums at the A.O.C. Show.

- 1 CHAMPION
- 4 FIRSTS
- 4 SECONDS
- 3 THIRDS
- 3 SILVER MEDALS
- 1 BRONZE MEDAL

U.S.A. AWARDS 1977

ZUMMA BOYD 'Yowie Bay' (4N) Award of Merit (AM) 3 August.

SLEEPING DREAM 'Tetragold' (4N) Award of Merit (AM) 14 October.

VALLEY GREEN 'King Neptune' Highly Commended Certificate (HCC)
14 October.

SARAH JEAN 'First Lady' Highly Commended Certificate (HCC) 14 Oct.

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Have you had difficulty obtaining Nitrosol? If so write to Animeals using the coupon and we will send you all the details. Nitrosol is made only by Animeals Pty. Ltd.

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Patex Pty. Ltd., 31 Angas Cres., Marino, S.A.
Sheedy's Nurseries, Port Moresby
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Jagerhof Orchids, Johns River, N.S.W.
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Stage Set For Giant World Orchid Conference

More Australians than have ever before attended an overseas World Orchid Conference will be journeying to Bangkok in January 1978.

This means that a great effort will be necessary to ensure that the Australian exhibit is in keeping with our position as a great nation of orchid growers. January is a difficult time for flowers in our seasonal cycle so a greater effort is necessary to ensure we have sufficient and worthy flowers.

Your effort can help, even one or two good flowers. Arrangements are being made by State Societies to collect flowers in metropolitan areas. Country Societies can help by forwarding even a small box.

Please send your name and contemplated list of available flowers to the secretary of your State Society.

It is estimated that over 2,000 orchid growers will register for the Conference and that over 200 of them will be Australians.

The export of plants and flowers is now a major industry in Thailand, due largely to the industry of one man, aided by the rapid growth of air transport.

The man is Professor Rapee Sagarik. After study at an agricultural school in Chience and at Kasetsart University, Professor Sagarik worked on agricultural projects in Chiangmai. Fascinated by the wealth of orchids in the area he realised the potential of cultivating them in a systematic way.

He studied overseas cultural methods then wrote a book designed to help ordinary members of the public. The Thai government encouraged his efforts.

His next step was to form an orchid society, and this eventually became the Orchid Society of Thailand. The Society now has more than 600 members.

Professor Sagarik joined the Department of Horticulture at Kasetsart University in 1961. From that base he was able to influence the growth of orchid growing as an industry and as a hobby in his homeland, and to ably publicise Thai orchids abroad. The Professor has attended all Orchid Conferences since the Fourth at Singapore, and lectured widely in the United States.

Promotion to Secretary-General, then Vice-Rector, of Kasetsart University came during this very active period. In May, 1975, he was appointed Rector.

The Professor has received many high honours from his Majesty the King of Thailand for his work in horticultural science. At the University an ever increasing number of students is being trained in all scientific aspects of orchid culture. Several orchid societies now help hobby growers to cultivate and enjoy orchids.

In Thailand orchids literally fill the jungles but the love of them is spreading out towards the people of the cities and towns. The spreading of knowledge and appreciation in a systematic way dates back to the time when a young soil scientist gazed at them in wonder in the jungle and determined that wonder should be shared as widely as possible.

To quote Professor Rapee Sagarik's own words: "Considering the delicate and ineffable beauty of orchids, to grow them is to provide man with a source of spiritual food causing him to love nature, the root, after all, of our 'raison d'être'. Moreover, in recent years, orchids have given rise to a new community, a community which is bound together by spiritual ties regardless of nationalities, languages, age groups, professions or social standings. I believe such a creative role played by orchids should not be overlooked in the context of present living".

With a philosophy and a purpose like that, even if you cannot meet the Professor at the Ninth World Orchid Conference, at least you can be sure that his influence will permeate through to you.

THAILAND ORCHID STAMPS

To celebrate the Conference Thailand is issuing a series of eight stamps. They are in two series based on slides taken by Professor Rapee Sagarik.

The stamps and first day covers will be on sale at Conference Hotels. Professor Sagarik has offered to autograph the first day covers.

The first set features *Dendrobium heterocarpum*, *Trichoglottis fasciata*, *Dendrobium hercoglossum*, and *D. wardianum*. The second set has *Dendrobium senile*, *D. pulchellum*, *Doritis pulcherrima* var. *buyssonianana*, and *Aërides odorata*.

Details of prices are not available at this stage. Enquiries may be directed to the Department of Post and Telegram, Bangkok, Thailand.

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covers all genera that have received FCC, AM, HCC, AD, AC, AQ and EA awards. Supplements will be available at regular intervals.

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197 (Pot Hidden Range x Blc. Rain Forest) x Lc. Kencolor 'Seafoam' — Green.

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No. 1 OF A SERIES

Getting started with Orchids

The first plants

RONALD KERR

You are a home lover! You have an area, be it ever so small, where the urge to grow challenging and rewarding plants can be indulged. With these qualifications orchid growing is a natural hobby for you to adopt.

The benefits go well beyond the pleasure of controlling the growth of beautiful flowers. The hobby can lead us up many intriguing paths and into many happy associations. There is always the stimulus of new avenues to explore.

How to start! Rule one would seem to be to obtain a few plants of a type which do well in your area. There are qualifications which will be dealt with shortly.

Rule two is to get good advice from established practical growers. Again there are qualifications.

Rule three is to join an orchid society and subscribe to an orchid journal. You'll find the company in a society is grand, and you can ask questions and get books from the library.

Rule four is to get to know the genera you wish to grow, both species and hybrids: Their growth pattern, special needs, and environmental backgrounds.

Lastly, determine to house your plants in a fashion adequate to their needs.

Each of these fundamentals demand detailed consideration.

Your first orchid plant may be a gift or an impulse buy at an orchid show. Or it could be a flowering plant from a florist or nursery.

Usually such plants are those which do well in the district where they are being sold. It is common sense not to buy a plant in Sydney on your way home to Queensland. Or vice versa. Until, of course, you have learnt to know your orchids, and can adapt your purchase to flower well in your area.

THE GIFT PLANT

If your first plant is a gift that's fine. If it's a gift from a special person that is better still because it carries a great deal of love, and, if after growing for a few years, you find it is only an average flower it is still worth a sentimental place in your collection.

Then there is the gift from an old grower. He is warmed by your interest and makes a generous gesture topped with some friendly advice. Good. It could be the start of a life long friendship. But don't expect a top ranking plant this way. Your friend has spent years building up his collection and will be anxious to eliminate its lesser members. After all he finds it the same effort to grow a top plant as a lesser one. There is a lesson in this for you.

Then there is the gift from Aunt Flo, or whomever. Aunt Flo has a few pots in the backyard she would like you to have. Seems she saw these at the local greengrocers years ago and bought them because orchids were fashionable and looked nice on the mantelpiece. They must be good, she

says, because she paid such a lot for them. But the darn things have gone back to a mass of untidy bulbs and haven't flowered for years. Anyway, she hasn't time to find out what to do to make them flower, but you . . .

Don't touch them. Repeat: Don't touch them. They will be somebody's culls flogged off on sale or return, and almost certainly due for repotting when sold.

Another lesson for you: Don't flog off surplus stock without ensuring it is properly potted and good value.

THE IMPULSE BUY

There are many places you may have the urge to buy a first orchid. At most orchid shows there is a sales stall which handles both nursery seedlings and members' plants. Many of the latter, particularly cymbidiums, are sold bare root. Excellent buys can be obtained in this way, but it can be like a lucky dip, and you have to wait a year or two to find out.

A good plan is to view the displays, and, since most plants are labelled, list some that you like. Ask at the enquiry desk which ones are easy to grow under your present considerations, and whether any of these are among those on sale.

Don't put the champion or major prize winners on your list. You won't get them unless you can offer the owner a fantastic price.

This way you start with plants whose flowers you like, and with advice on how to grow them. While at the desk ask about society meetings. There may be some helpful literature on sale, too.

Some store gardening departments and florists feature flowering plants during the flush flowering season. These are reasonable value and potted to ensure at least another good year of growth and flowering. With these plants you can be sure of attractive flowers, but do not expect them to be winners on the show bench.

At times some chain stores have sold orchids garnered from the Queensland bush. Until recently Queensland made no real effort at control and bush orchids, presumably from private property, could be exported to other States where they could be sold quite legally. This was because State laws apply to orchids growing within the State. Most plants sold in this way require special growing conditions and the average buyer would have little chance of growing them successfully.

Lately chains appear to have dropped this line of business, but don't be tempted should you see a counter of bush orchids. If you are knowledgeable you might find something of interest, but if not, leave them well alone.

THE ORCHID NURSERIES

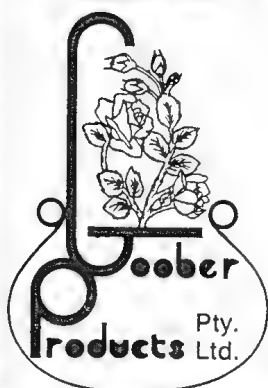
Having avoided the gift and resisted the impulse buy the obvious source of beginning plants is a specialist orchid nurseryman. The key word is *specialist*. Be candid. Tell him you know nothing

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but wish to make a secure start. He will question your growing conditions and advise you soundly. As an established nurseryman he cannot afford to jeopardise his goodwill with wrong advice or overselling. He has a vested interest in making you a valued customer for many years ahead.

You may be surprised at the prices of some of his best stock. Even if you can afford them leave them alone at this stage.

Your immediate need is to acquire a few established plants of a genus which does well in your area, and which won't break your heart or your pocket should your conditions not suit, or your inexperience lead you into errors.

The task is to adapt new plants to your environment, and this is a skill to be acquired by experience. The development of skills to flower plants superbly well is part of the fascination of orchid growing.

ORCHID AUCTIONS

Occasionally collections come up for auction due to the death or transfer of a grower, or whatever. Again, the knowledgeable grower may be able to pick up interesting items at reasonable prices. However, you can depend upon the collection having had the really choice items picked over beforehand. Anything really good for auction will excite real competition and hence become overpriced. So, in general, auctions are not a good way to acquire your first plants. Rarely too, can you get cultural advice on a particular plant at an auction, and you could find yourself with some expensive heat-loving plants and no hot house.

Leave auctions until you really know your orchids, not just how to distinguish genera, but what are the best species forms or hybrid types within a genus.

GET QUICK RESULTS

It is important that the first plants should be near flowering stage. It is a great spur to your interest and a source of pride to the family to see those first lovely home grown blooms decorating the hall or living room.

When you know you can flower them well you can confidently become more adventurous in what you buy. Also, having started with a single genus, or at most, two genera, the flowering period may only be six to eight weeks. As you expand genera to give year round flowering can be added. But early on the non-flowering period gives you time to expand and improve your housing.

It is only possible to go a short way in orchid growing without adequate housing. Spend money on housing before acquiring any expensive orchids. Correct growing conditions save a lot of frustrations and disappointments.

Later in this series it will be shown that valuable plants can be obtained quite inexpensively once you have mastered the technique of growing them.

So start looking now for a few nice beginning plants, and as a useful start check the names of orchid nurseries within easy access by looking through the advertisements in this issue.

Next issue will describe, in a general way, the popular orchid genera. Future articles in this series for beginners will include suggestions on:

- Building a collection;
- Acquiring cultural knowledge;
- Fundamentals of culture;
- Horticultural orchids;

Botanical orchids;

Orchid Shows and Awards;

Housing your orchids.

Make sure of following this series in its entirety by taking out a subscription now. Details are on the title page.

260 Geoffrey Road, Chittaway Point 2259

PRACTICAL WELCOME

Melbourne Eastern Orchid Society have adopted a very practical way of welcoming new members: They give each one a copy of *A Book for Orchid Lovers*. This book is published by the Orchid Club of S.A. and contains information on all popular orchid genera. Valued at \$2.50 this is an excellent introduction to orchid growing and a fine gesture by M.E.O.S. Other societies could well give this idea a thought.

THIEVES STRIKE

Famous stud plants stolen

In the middle of October last, thieves removed most of the outstanding stud plants from the collection of Mr. Kevin McFarlane, situated at Edge Hill, Cairns.

These plants were the result of many years of careful and planned line breeding and are irreplaceable. Furthermore, Mr. McFarlane is the only breeder who would know how to make effective use of them in a breeding programme.

Many of the clones are well known and easily identifiable. Thus they are of little use to a hybridiser because their characteristics would show up in the progeny. Similarly anyone attempting to show them would risk detection.

So, what satisfaction can any individual gain by growing plants he can't be proud about showing to other growers? Such a person would be well advised to pack them off back to Ken immediately, freight collect if he happens to be that badly off. If he reads this: How about it mister. It would be your best way of serving Australian orchids.

Incidentally similar thefts in the Newcastle area were traced by methods which won't be detailed here, but could work in this case. The Newcastle case led to two convictions.

If you have information which could help investigations now taking place please contact Mr. McFarlane by phoning (STD 070) 53 1868, or Mr. Bill Smoothey (STD 02) 46 2567. Charges may be reversed.

SNAIL BAITS CAN KILL DOGS

In the Newcastle *Herald* appeared an article saying slug killers can become pet killers. An extract reads: Every time there is a spate of dog poisonings in a district an alarm goes off. Suspicions of an animal baiter are often unfounded. Snail and slug killer pellets can prove fatal to dogs.

Norm Hellier in Newcastle O.S. Bulletin.

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Rare Species

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Dendrobium albosanguineum — white — Burma

Aerides maculosum — pink purple — India

Dendrobium miyakei — cyclamen purple — China

Phalaenopsis fasciata — yellow — Philippines

Oncidium varicosum "Rogersii" — yellow — Brazil

Dendrobium margaritaceum — white and red —
Thailand

Cymbidium monroeianum — green-yellow — red
spotted lip. — Burma

Paphiopedilum delatanii — pink flowering size —
nursery-grown from seed

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— Philippines

Paphiopedilum curtisii — deep brown, purple

Paphiopedilum roebellinii — white, striped purple

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A descriptive list of the 10 crosses, cultural information and deflasking procedure
will be available on request.

The proceeds from the sale of these flasks will go to the funds of The Australian
Orchid Foundation.

Flasks will also be available from:

Frank Slatterys Orchid Nursery, 12 Eddystone Road, Bexley, N.S.W.

McKinneys Nursery, 87 Turton Street, Sunnybank, Queensland.

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The nursery is situated in Canning Street, off Humphries Road, Mt. Eliza.

CATTLEYAS

F. C. STARK

I have been growing Cattleyas for about twenty years and during that period have done extensive experimenting with different forms of housing, potting, watering and fertilizing, and am now convinced that Cattleyas will grow well under quite a variety of conditions. However, two things are essential: Good drainage and sufficient light.

I grow my mature plants under 52 per cent shade cloth. The southern side of the house is walled right in. The north, east and west are walled to about one foot above bench level and the rest with 52 per cent shade cloth. I am still using some wattle and oak bark for potting, but have been getting some spectacular results during the last three years with plants in pure vermiculite.

I have overhead spray lines. I water every second day in hot, dry weather and once a week in the winter.

I use only liquid organic manure once a fortnight in the summer and once a month in the winter. This consists mainly of cow manure and some blood and bone, and is used at a strength looking like weak tea.

The main pests here are scale and Brown Rot (*Pseudomanos cattleyae*).

I have little trouble with insects as the house is virtually insect proof. The scale is easily controlled by an occasional spray of Rogor and white oil. The brown rot can be controlled by washing the affected plant, cutting off the rotted parts and submerging 15 minutes in copper oxychloride solution.

I would not recommend this latter treatment on any plants other than mature Cattleyas as burning may result.

Most of my young plants I take from flasks and these are grown for two years in a heated glass house with 75 per cent shade, relatively high humidity and a minimum 10°C temperature. They are then large enough for four inch pots and if taken out to the bush house in early summer do not get a setback.

I will also recommend vermiculite for these plants that are just de-flasked.

A good overall spray for the young plants is 3 oz. T.M.D.T., 3 oz. D.D.T. 25%; 4½ oz. Sulphur to 10 gals. water.

This mixture will control most insect pests and both fungal and bacterial diseases. A light dusting with metaldehyde controls.

Pine Ridge Rd., Southport, Q'ld. 4215

NEW EDITION

"Handbook on Orchid nomenclature and Registration"

This handbook was published by the International Orchid Commission, a body dating back to the Second World Orchid Conference held at Hawaii in 1957, and is financially supported by the American Orchid Society, and the Royal Horticultural Society as International Registration Authority.

In some cases the list of recommended names for horticultural purposes differs from current botanical opinion. The International Registration Authority for Orchid Hybrids has tended to retain those names which have been used substantially in the past for registration purposes. In such cases the horticulturalist will have to make up his own mind what to label his plant, but if he wishes to register a cross from it the IRAOH will only do so under the name recommended in the Handbook.

This will mean that some confusions will continue and the job of orchid editors and award registrars will go on being difficult.

There are too many of these variations for them to be detailed here, and possibly mentioning them out of context could be dangerous. Broadly, the bulbous *Encyclia* section of *Epidendrum* is not recognised as a separate genus for registration purposes, nor has the recent splitting off of some *Vanda* and *Aerides* species to *Papilionanthe*.

On the species level *Dendrobium nindii* will continue to be registered under the names *D. ionoglossum* (presumably for the New Guinea form) and *D. toftii* (presumably for the Australian form). The logical reclassification of *Angraecum philippinense* to *Amesiella philippinense* is not recognised by the IRAOH. And while the botanical correctness of *Euanthe sanderana* is recognised the Authority will continue to adhere to *Vanda sanderana*.

The Handbook is particularly valuable in its detailing of the correct way to apply the writing of names. Here the advantages of standardisation are readily apparent because a correctly written form of name can tell quite a story.

Everyone concerned with the names of orchids should have a copy of this handbook, and one should be an essential part of every society library.

The recommended list of orchid names for horticultural purposes will not satisfy everyone, nor prevent all arguments, but it should provide a reasonable degree of stability for the nurseryman and hobbyist grower in a discipline where botanists often decide changes in classification are necessary, where identifications are shown to be wrong, and where the rule of priority shows that an earlier name is valid.

However, orchid hybridisers cannot afford to scoff at botanists who apply new knowledge from research into the ambit of a rigid *International Code of Botanical Nomenclature*. Instead they should determindly ensure that the species they register as parents are correctly identified. One example of this which throws doubt on a number of registrations is the confusion between *Dendrobium bigibbum* and *D. phalaenopsis*.

To get your copy of *The Handbook on Orchid Nomenclature and Registration* send a bank draft for £2.25 sterling (includes surface postage) to The Royal Horticultural Society, Vincent Square, London, SW1P, England.

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SS335	CYM. SENSATION 'MELITA' HCC/AOS x VIEUX ROSE 'DELL PARK' FCC/RHS Deep pinks to dark reds 2½" tubes \$2.00 4" pots	\$3.50
SS334	CYM. VIA REAL Glistening white exhibition quality 2½" tubes \$2.00 4" pots	\$3.50
SS270	ONC. KRAMERIANUM Large yellow bloom marked reddish brown — Costa Rican variety of Papilio. 2" pots	\$2.00
SS311	LC. CULMINANT 'LA TUILERIE' x (LC. SOUTH ESK 'JUDY DOIG' FCC/AOS x LC. BONANZA 'PAYDIRT' (AM/AOS) Exhibition lavenders 2" pots	\$2.00 3" sq. pots \$3.00
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New pseudobulbs grow quickly and watering and fertilising should be frequent during this period. When leaves die back most species sent up a number of stems on which a single flower develops. From this point watering should be restrained.

A few species in the genus flower as the new leaf growth develops, most complete flowering and rest before commencing new growth.

An open compost with chopped fern and medium barks seems to suit them, although some growers use an open cymbidium compost. They like extra shade but abhor stagnant air.

Best known of the genus is *Lycaste virginalis* (syn. *L. skinneri*) a truly regal orchid. There are nearly forty other species and many of them are available at nurseries. Two of them are shown here.

Top: *L. aromatica*. Has a scent rather like lemons. It is mainly yellow with the petals a deeper yellow, and orange dots on the labellum. It comes from Central America in a habitat bounded by Honduras and Mexico. Flowers in Spring.

Bottom: *L. deppii*. A native of Mexico and Guatemala. The waxy flowers are variable in colour. The sepals are usually pale green spotted with red, and the petals white flecked with red spots and stripes. The labellum is white except for red spotting. Flowers mostly in Spring but will sometimes flower at odd times.

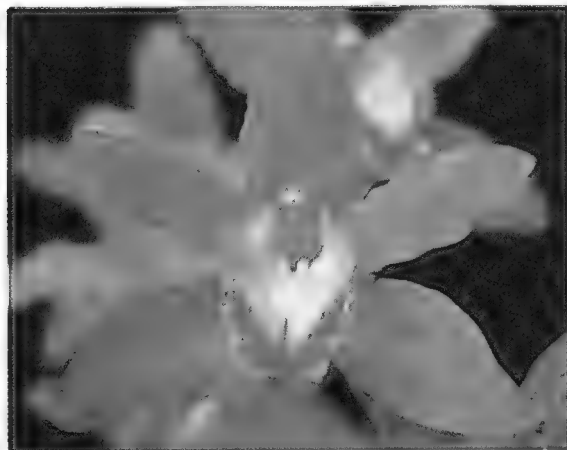
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Fifth Australian Orchid Conference

JOHN FOLEY

When the Orchid Society of Western Australia (Inc.) were informed that it was to be the host society for the 5th Australian Orchid Conference, to be conducted during 1977, the time seemed so far away and yet the time has come and gone and the Conference is all over.

The Conference was a great success with 300 registrants. Many new friendships were formed and many old friendships renewed, a carnival atmosphere prevailed throughout, the weather, although we badly wanted rain, was excellent apart from the afternoon of the tour of Kings Park when a shower of rain caught a number of registrants unprepared.

The Shearton Perth Hotel proved to be the perfect venue for the Conference. The Show, presentation of papers, Judging Seminar, the AOC meeting, luncheons and the banquet were all held on the one floor without interruption to any other functions.

There was great activity on the Sunday, set up day, with hundreds of plants having to be brought to the Show floor from the unloading bay at the hotel, one floor below, there were many people scurrying here and there with trolleys loaded with plants, others were claiming their orchid plants and foliage plants, etc., with all this activity the setting up went off without any serious troubles being encountered.

The Conference and Show was opened by His Excellency the Governor of Western Australia, Air Chief Marshal Sir Wallace Kyle, accompanied by Lady Kyle, on the Monday afternoon at 2.30 p.m.

The Governor and his Lady were met in the foyer of the Sheraton Perth Hotel by the Manager of the Hotel. The President of The Orchid Society of Western Australia (Inc.) Mr. Roy Brown and Mrs. Brown, the Hon. Secretary of the Orchid Society of Western Australia (Inc.) and Chairman of the Organising Committee for the Conference, Mr. John Foley and Mrs. Foley.

On reaching the first floor, which was the Conference floor, Lady Kyle was presented with an Orchid Corsage by the President of the Ladies Auxiliary Mrs. Kay Baylis, who is also the Hon. Treasurer of the Orchid Society of Western Australia (Inc.), it was

at this point that the President of the A.O.C. and his wife, Mr. and Mrs. Monkhouse, were presented to the Governor and his Lady.

The official party moved to the dias which had been set up in amongst displays of the Conference, a really beautiful setting for the official opening and presentation of the flag to the President of the A.O.C. by Mr. Roy Brown on behalf of the Ladies Auxiliary who had the flag specially made; this flag at the conclusion of the Conference was presented to Tasmania who will conduct the 6th Orchid Conference in October, 1979, at which the flag will be flown.

The Governor in his speech at the opening ceremony said how pleasantly surprised he was at the beauty and the presentation of the orchids.

The Governor and his Lady were escorted through the Show and showed so much interest that they were behind schedule at afternoon tea, where they were joined by Members of the Organising Committee and their wives, Sir Crawford Nalder, Patron of the Orchid Society of Western Australia (Inc.), and Lady Nalder, Mr. John Tonkin, Patron of Melville District Orchid Society and Mrs. Tonkin.

The cocktail party on the Monday evening proved a great success. Registrants continually moving about meeting other registrants and so helping to get the Conference off to a very friendly and happy start.

The Civic Reception to overseas and interstate visitors was well attended and the Lord Mayor of Perth, Mr. Ernest Lee Steere in his address to the gathering wished them all a happy stay in Perth and a successful Conference. Accompanied by Mr. Monkhouse, the Lord Mayor then mingled with the guests who were enjoying the refreshments provided by the Perth City Council.

Banquet and presentation of prizes went off without a hitch, the highlights being the speech of the President of the A.O.C., the presentation of trophies by Lady Nalder, the cutting of the cake by Mrs. Shirley Monkhouse, the cake was made and decorated by Miss Ruth Bishop, the decorations consisted of the map of W.A. in the State's colours and a beautiful white Cattleya Orchid.

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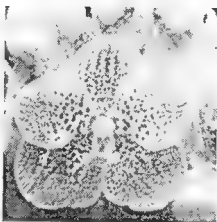
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those attending the 6th Australian Orchid Conference of a great time.

Mr. French of New Zealand spoke of the forthcoming New Zealand Orchid Council Conference to be held in 1980.

Those attending the tour to El Caballo Blanco had a wonderful experience, seeing orchids growing in their natural state. A smorgasboard luncheon at the hotel, the stud of the Spanish dancing horses and the Museum, each bus on the tour had representatives of the W.A. Native Orchid Study and Conservation Group (Inc.) travelling with it to answer any queries and to escort the registrants to known orchids grown in the area.

The wind up dance and buffet supper on the Saturday night was a fitting climax to a wonderful week, the band was excellent, the supper was wonderful, beautifully presented and organised.

The Show itself was magnificent, remarks like "Equal to what I have seen anywhere", "Would not have missed it for anything", "Glad I came", were common.

The enthusiasm and determination of some of the exhibitors to be in the Show was remarkable, there was one group, George and Pat Jagger, Ray Dean and their party after a series of mishaps, finally arrived at the hotel with their van full of orchids on a trailer and the lot being towed, a half an hour before set-up time on the Sunday morning, they immediately set about setting up their exhibit which was a credit to them all.

Such enthusiasm is catching and augers well for the future orchid conferences.

FIFTH AUST. CONFERENCE SHOW MAIN PRIZES

GRAND CHAMPION ORCHID OF THE SHOW:
Awarded to *Phal.* Spring Showers 'Oriol' x *Phal.* Doreen.
Exhibited by Mr. and Mrs. L. Gale.

CHAMPION CYMBIDIUM:
Awarded to *Cym.* Highland Mist 'Dillabirra'. Exhibited by Mrs. B. Gready.

CHAMPION PURE COLOUR CYMBIDIUM:
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Class 2. Best Display by a Society Affiliated with O.S.W.A.:
1st Native Orchid Study Group, 2nd Bunbury Orchid Society, 3rd Melville Districts Society.

Class 3. Display Joint or Individual:
1st Dean, Jagger and Sweetman, 2nd K. and D. Rex.

Class 4. Display by a Commercial Orchid Grower:
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One *Cymbidium* Yellow: Awarded to *Cym.* Alnwick Castle 'Cariga'. Exhibited by McBeans Ltd.

One *Cymbidium* Green: Awarded to *Cym.* Lloyd Hawkinson 'Piedmont'. Exhibited by Mr. J. DeLacy.

One *Cymbidium* Seedling: Awarded to *Cym.* Alnwick Castle 'Cariga'. Exhibited by McBeans Ltd.

One Australian Native Orchid (Species or Hybrid): Awarded to *Den.* *gracillimum*. Exhibited by K. and D. Rex.

One Cattleya: Awarded to *C.* Lunar Orbit. Exhibited by Mr. and Mrs. L. Gale.

One *Paphiopedilum*: Awarded to *P.* Canberra Ronndelay. Exhibited by Adelaide Orchids.

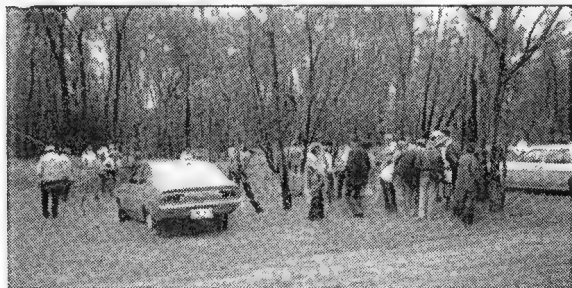
One *Phalaenopsis*: Awarded to *P.* Spring Showers 'Oriol' x *P.* Doreen. Exhibited by Mr. and Mrs. L. Gale.

One Any Other Genus: Awarded to *Odm.* Quisto. Exhibited by Mr. Ron Smith.

W.A. Native Orchid Field Day

HERB FOOTE

To meet an interest shown in the Western Australian terrestrial orchids, the W.A. Native Orchid Study and Conservation Group offered visitors to the Fifth Australian Orchid Conference a field day to selected areas near Perth so that they could see some of the native orchids growing in natural environment. Friday, September 15th was chosen as this was a "free day". The response was so great that it was at first feared that Group members would be unable to cope. A small bus was made available and after a shuffle about of car drivers, the necessary licensed bus-driver was found, but as several of our visitors agreed to drive their own cars all applicants were eventually accommodated.



CONFERENCE FIELD DAY

Organised by W. A. Native Orchid Group, showing some who attended and the type of country in which W.A. terrestrials flourish.

The day proved quite a success and the only rain encountered was while travelling between stops. Not quite so with three of our party. Lorrie and Carrie Friar of South Grafton and Eris (Barney) Eakin of Sydney offered to have the barbecues a going concern in time for lunch, and in spite of a down-pour during the fire-lighting process, when the cars pulled in to Boulder Rock on the Brookton Highway, the barbecues were ready and the water boiling.

Our thanks to these three and all who came along and helped to make the day the success it was.

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The 1977 Annual Meeting of The Australian Orchid Council

PRESIDENT'S SUMMARY

A very successful meeting of the Council was held in conjunction with the Fifth Australian Orchid Conference in Perth on September 14th.

All state societies were fully represented at the meeting. The agenda was quite large, however all matters were dealt with fully and because delegates kept strictly to the points under discussion, business was despatched by 4.00 p.m. in the afternoon. I commend delegates for their business-like approach to all matters.

A highlight of the meeting was the approval of the award of "Honorary Fellowship" to Mr. George Marshall of the Orchid Society of Western Australia Inc. for an outstanding personal contribution to the Council.

The adoption of a drastically revised constitution for the A.O.C. was adjourned until the day before the 1978 Annual Meeting to give all States ample time to closely inspect the contents of the proposed changes and time to correspond, *through the A.O.C.*, with other State societies in amending or modifying any proposed alterations. The altered constitution was very fully explained and should have given delegates a much clearer picture of what is intended by the alterations (fully endorsed by the majority of executive).

The publishing of reports and their acceptance greatly streamlined the meeting, and discussions of judging items on the agenda, at the Judging Seminar the day before, reduced time on many of these submissions.

Several important judging decisions were passed and now become law in orchid circles in Australia.

1. Judging of Species Orchids

A majority decision carried the resolution that all species orchids are to be judged for award of H.C.C., A.M. or F.C.C. under the standards for appreciation as detailed on pages 5, 6 and 7 of the A.O.C. Judging Standards.

viz. SHAPE	30
COLOUR	30
SIZE	10
FLORIFEROUSNESS	10
STEM	10
SUBSTANCE AND TEXTURE	10
	<hr/> 100

It is assumed that judging under this system can only be affected with consideration of clones of the

same species and details of other previously awarded clones of the same species.

Certainly this step by the Council is, at long last, a move in the right direction and the first towards a closer standard of judging to World judging bodies such as the R.H.S. and A.O.S.

Unfortunately, the move that all hybrids not conforming to the classic forms of a genus be judged similarly was defeated after some rather remarkable voting by State delegates. It is hard to see the logic of passing the species judging rule above and rejecting pretty well the same motion in the case of hybrids, however, this probably underlines the difficulties of an Australia wide association in conveying sentiments between members so widely separated geographically.

2. Manipulation of Flowers

The National rule regarding manipulation of flowers and racemes was eliminated from the book. This strongly supported resolution was a very logical one and, whilst I am sure that any damage caused by manipulation of any orchid being judged will disqualify that flower for judging under the damaged bloom clause, we must realise that "grooming of flowers" or tying of stems above the bottom flower does not now disqualify the orchid for awarding and, I assume, from winning show prizes.

To me, this is a very sound step. I believe very strongly in the old adage: "You cannot make a good flower out of a bad one by manipulation, but you can make a good flower better". By lifting the restriction of ban on this practice the A.O.C. has probably made honest exhibitors out of 95 per cent of our growers and brought them into line with other flower exhibitors, animal exhibitors and bird exhibitors.

3. Regional Judging

A suggestion by our Registrar General, Mr. Athol Bell, that Australia is now ready for Regional Judging after some 16 years, resulted in a resubmission by the Orchid Club of South Australia that all State Judging Panels become regional panels of the A.O.C.

The proposal was fully discussed and support was gained to a trial period of two years in which all awards are submitted to the Registrar General in the same manner as previously but that the Registrar General can grant immediate approval to the State award or, if in doubt, circulate the slides in the usual manner.

4. Australian Orchid of the Year

Procedures for selection have been drastically changed. In the event of only one F.C.C. award for the year, this automatically becomes Orchid of the Year. In the event of no F.C.C. but only one A.M. then this is Orchid of the Year. If there are more than one of the above awards given then the same procedure occurs as the event of no A.M. or F.C.C. awards and this is as follows:

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Australian Orchid Conference

PERTH, SEPTEMBER, 1977

Congratulations to the Orchid Society of W.A. Inc. for an excellently organised and highly successful Australian Orchid Conference.

Unfortunately, I was only able to be in Perth for three days, during which 1½ days were taken up with meetings but even in my short stay I could not help but be impressed by the organisation of the various functions, the excellence of the Sheraton Hotel both as a venue for the Conference and as a place to stay and the efficiency of the organising company Convention Co-ordinators.

Surely the greatest ingredient of a successful conference must be the ease in which orchid growers from "all over" mix freely, forming new and lasting friendships and renewing old ones. In this aspect the Fifth Conference was outstanding.

Orchid growing is just starting to "boom" in the delightful climate of Perth and I do not need to be Methuselah to predict a rapid rise in both size and number of clubs in the area. The future is certainly yours, Western Australia, after this one big test — the successful running of an Australian Orchid Conference, and with the drive and ability of the many keen young and old members in your Society, you are headed for a very bright future.

SYD. MONKHOUSE
President, A.O.C.

awards have been granted only the two or three choices will have to be made. These choices are listed in order of preference and, of course, the winner decided by the overall preferences.

Certainly this will simplify the Award of the Year voting.

"Genus of the Year" has now been eliminated but Award of Distinction of the Year remains and is voted on in the usual manner.

Other important decisions included —

1. Increase in award registration fee to \$10.00.
2. Applications for the A.O.C. gold plaque must be accompanied by the \$12.00 payment for the plaque.
3. Capitation fees which hadn't changed since the formation of the Council were increased to 20c for members.
4. Associate members' annual fee was increased to \$10.00 per year.
5. Applications for A.O.C. colour slide programmes cannot be guaranteed for any special date unless received by the Programme Librarian at least 90 days beforehand. Of course it is also necessary to request substitute programmes when placing the booking. Late arrival of requests will still be given every attention by the Librarian but no guarantee of arrival for the date required can be made if less than 90 days notice given.
6. The proposal of the A.O.C. starting an Orchid Diseases research fund was supported by delegates but a decision deferred until a more detailed proposal could be submitted.

Mr. Tom French on behalf of the New Zealand Orchid Council, extended an invitation to members of the A.O.C. to support the First New Zealand Orchid Conference to be held in Auckland in October, 1980. Council Members welcomed the announcement and promised to give full support.

Officers of the A.O.C. for 1977-78 are as follows:

President	Syd. A. Monkhouse, S.A.
Vice-Presidents	Frank Slattery, N.S.W. Lou Sasso, N.S.W.
Registrar General	Athol Bell, N.S.W.
Secretary	John Harris, S.A.
Treasurer	Don Gallagher, S.A.
Programme Director	Gerald McCraith, Vic.
Programme Librarian	George Woolley, Vic.
	SYD. MONKHOUSE President, A.O.C.

Editors Note: Mr. Monkhouse, in the above report, also covered the new A.O.C. Standard for Novelty Cymbidiums. However, since this will be the subject of a special article in the March 1978 issue, this item has been held over.

These premises will close for Christmas between December 1, 1977 and January 30, 1978. We apologise to clients whose orders have been delayed through our missing September issue advertising date. All culture media (see March, 1977 issue A.O.R.) will again be available after January 30, 1978. New price per pack (sufficient for one litre) is now \$3.00, post paid.

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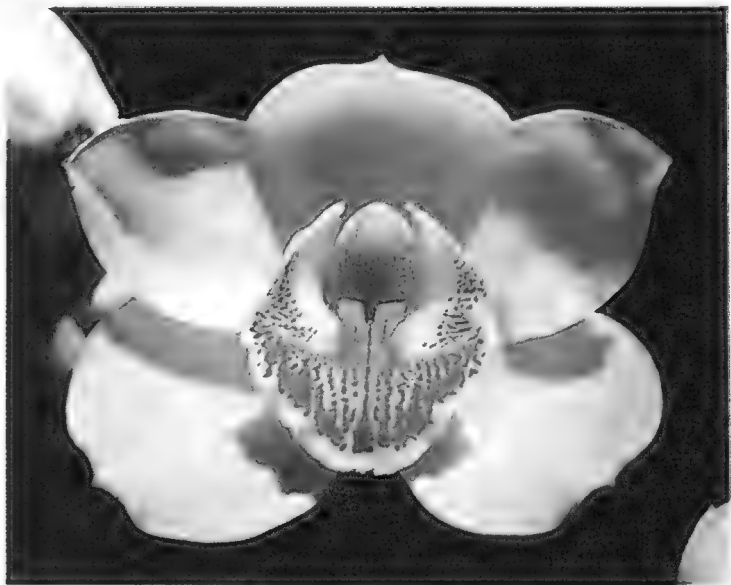
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Around The Shows

ORCHID SOCIETY OF N.S.W.

Spring Show excels

In spite of difficulties engendered by the absence of many leading growers at the Perth Conference, the Spring Show held at the huge Roselands Shopping Centre was an outstanding success.

This was due to excellent teamwork and the dedication of many individuals, however, all who took part will agree that one man is particularly worthy of praise for the terrific effort he put into the organising and running of the Show, namely the Show Marshal, Mr. Ron Chalmers. Ably backed by Mrs. Chalmers and son Ian.

The Show proved once again just what a magnificent cross is the grex *Cymbidium* Highland Mist. Grand Champion was Mr. R. Miller's *C. Highland Mist* 'Barrita', with Reserve Champion *C. Highland Mist* 'Caroline', owned by Mr. C. Fraser. There was little between the individual flowers, and possibly only the greater number of flowers on the 'Barrita' spike made the difference between the two clones.

Dendrobium Bardo Rose was again to the fore when a plant owned by Mr. W. Upton won Champion Native.

Champion Cattleya went to Mr. J. Lambert's *Lc. Culminant* 'La Tuilerie', and Champion *Paphiopedilum* to Mr. W. Hughes' *P. Sonoma* 'Latin Beauty'.

Mr. J. Neale notched a major success with *Phalaenopsis* Champion, a cross between *P. Bruce Shaffer* and *P. Spring Showers*.

This year there was a special class for Champion Exotic Species, and this went to a well flowered *Cattleya loddigessii* var. *harrisoniae*. Champion Any Other Genera went to a clone of Mr. J. Apperley's fine *Lycaste* cross *L. Shoalhaven* 'Nowra'. Mr. C. Fraser was somewhat recompensed for his narrow defeat in the Show Championship by his win for Best *Cymbidium* Seedling with a cross of *C. Mary Ann* x *C. San Miguel*. Watch this one in future shows.

North Shore won the large display class with some beautiful and well presented orchids, rich in genera, but with a somewhat macabre theme which equated the dying out of some orchid species with human death. The symbolism might be right but it was received with mixed feelings.

Parramatta put up their usual good show to come second. They have some good growers and North Shore cannot afford to be complacent next year.

St. George, Eastwood and Sutherland filled the next placings in that order, with displays which would be distinctive in any company. The eight other societies in this section contributed worthy and interesting exhibits of great appeal to the public. They missed out on points for lack of a few more genera, or a lesser proportion of prize winning clones. Still, the enthusiasm is there and any of them is capable of coming nearer the top at future shows.

There were some very nice small tabletop displays staged by Mr. and Mrs. Chalmers, Mr. and Mrs. Dobell, and Mr. and Mrs. Colthup.

Spring Show at S.A.

K. J. STAPLES

The Orchid Club of South Australia Inc. staged the annual spring orchid festival for 1977 in John Martin's auditorium. The theme was "Orchids in Royal Splendour", and the backdrops arranged by John Martin's artists highlighted a fine display. The overall spectacle was very pleasing.

The winning exhibit was staged by Messrs. Chenoweth, Clayton and Packard. Their theme was that of a maypole with blooms artistically arranged.

The most outstanding bloom of the festival was Mr. and Mrs. Uptis' *Cymbidium* El Capitan 'Mem. Robt. Chrisman'. The plant when flowered to perfection is very hard to beat for best.

The reserve champion cymbidium was *Cymbidium* Anita 'Emily' grown and exhibited by Mr. and Mrs. Dicmanis. The bloom was a lovely pink and close in quality to the winner.

The most outstanding bloom other than a cymbidium was *Phalaenopsis* Schoene Von Celle 'Idlewild' grown and exhibited by Johnston Orchid Nursery. A shapely white phalaenopsis that is sure to gain an award when grown into a larger plant.

NEW AWARDS AT S.A. SHOW

Several plants were considered for awards by the judging panel:

Cymbidium Anacapa 'Montecito' grown and exhibited by Mr. B. Hansen was granted an Export Award. The Orchid Club seldom awards plants with this award, but the semi-arching spike of bottle green colouring with a pleasing contrasting labellum which was banded red, made it very desirable for an export orchid. The raceme held 13 large flowers arranged in a perfect row enabling packing to be quite easy.

Dendrobium New Guinea was awarded a Cultural Certificate for owners Johnston Orchid Nursery. The plant had 40 canes and was growing in a 18 cm plastic pot. There were 24 made up canes each with a raceme of seven flowers. The flowers were quite large of pale green-cream colour. The petals slightly antelope were spotted brown also the stems. The labellum was green with cerise striping, the column apple green. A very attractive *dendrobium*.

Miniature *Cymbidium* Lynette 'Balin' grown and exhibited by Mr. M. Chenoweth was granted ICC/OCSA. A nicely presented miniature with five upright spikes displaying the flowers perfectly, which were of very round filled in shape. The colour was a yellow-green with an overlay of red. The labellum was white and heavily marked with purple. A nice mini.

Potinara Carrousel 'Crimson Triumph' was awarded an AD for owners Adelaide Orchids. The outstanding colour of all over vibrant glistening red-purple made the flower an easy choice for the award. The plant held two flowers which were of good shape also for this type, flat and held on a strong stem.

OTHER S.A. AWARDS

11.8.77 *Haemaria* discolour owned by Greens Orchid Nursery was granted a Cultural Certificate ocsa. The plant mainly grown for the beautiful foliage measured almost one metre across, growing in a 25 cm pot. The leaves of velvet black were striped with a greyed purple, there were also 16 heads of perfect up to 3 cm whitish flowers, each of which had approximately 30 flowers. These plants being rather hard to grow, and the way this one was presented gained the award.

11.8.77 *Paphiopedilum* Canberra 'Roundelay' grown by

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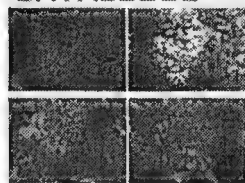
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Adelaide Orchids was granted HCC/OCSA. A well grown and presented plant had one flower held on a 30 cm strong stem. The well displayed flower was held well above the foliage and with the strong wide and flat petals made it a showy bloom. The colour of the dorsal was white spotted with red, blending into a solid red centre. The ventral was yellow green and the petals from greyed orange grading to yellow green.

8.9.77 *Paphiopedilum villosum* grown by Mr. G. C. White was granted a Cultural Certificate OCSA. A beautifully grown plant growing in a 16 cm plastic pot with 11 glistening flowers held well above the foliage. The blooms were a pale brown colour, the dorsal having a well defined brown stripe and the petals having a smaller stripe. A specimen plant grown to perfection by the owner.

8.9.77 *Paphiopedilum* Royale 'Camelot' grown by Adelaide Orchids was granted a HCC/OCSA. A nicely grown plant well presented with one flower held on a long strong stem held well above the foliage. The dorsal was white striped with red purple darkening at the centre. The ventral yellow green, the petals divided, the top an orange shade and the bottom a yellow green. The labellum yellow green with an orange overlay. An attractive *paphiopedilum*.

17.10.77 *Paphiopedilum delenatii* 'La Tuilerie' owned by Adelaide Orchids was granted HCC/OCSA. A small plant with attractive dark green foliage lightly mottled. It held one long stem with two delicate pink flowers, each flower having a lovely round pouch. The flowers were whitish with faint blushed overlay of purple, the back of the flowers spotted purple. A most attractive and delightful orchid.

Q.O.S. Spring Show

The Queensland Orchid Society Spring Show in the Park Royal Motor Inn, which is in the heart of the city, took place during Warana Week (Fun in the Sun) from Friday 30th September until 2nd October.

Orchid Society members always enjoy orchid shows, but the enjoyment and amazement expressed by visitors on seeing all the beautiful orchid blooms is really gratifying to those who put so much effort into staging the show.

Many of the affiliated societies arranged large mass displays, alongside trade displays, the latter exhibiting many interesting new crosses in assorted genera.

Members of the affiliated societies who were responsible for their displays, portrayed numerous themes, such as "Tea House of the Orchid Moon" by the Ipswich Orchid Society, against a mural depicting the moon, painted by Pino Zerlotti, a Japanese style setting was presented containing some lovely orchids. One not to go unnoticed was the soft cane *Den.* Glorious Rainbow.

"From Home and Abroad", was the theme of the North Albert Orchid Society, whilst John Oxley Orchid Society arranged their display to the theme "Orchids, It's Heavenly", showing some very nice phalaenopsis, which always attract attention.

"Sitting Pretty" was another theme of the West Brisbane Orchid Society, whilst the winning display was "Orchids and Old Lace" — a setting of some very fine orchids in a garden with old lace style metal furniture, surrounded by a similar style fence, arranged by the Brisbane Orchid Society.

Toowoomba Orchid Society staged a cut flower display "The Magic of Spring", backed by cymbidiums, and then on to feature some very nice blooms. Winning its class.

The Species Orchid Society with "Swing into Spring", also gained a first placing, some very fine species orchids arranged round a swing in a garden setting.

The Champion Orchid of the Show was *Cymbidium* Highland Mist 'Dillibirra', owner, Mr. T. Rees, who had brought this plant down from Toowoomba. Ten large off white good shape blooms with labellum of same colour

spotted in deep magenta.

Reserve Champion went to *Paph.* Nowra x 'P. Small World, tabled by the President of the Toowoomba Orchid Society, Mr. Nev. Douglas.

Champion Novice Class was taken out by *Den.* Mt. Fuji, owner Mr. A. Randall.

Two very fine blooms of *Lc.* Culminant 'La Tuilerie', grown in bark and charcoal was the selected Champion *Cattleya* of the Show and gained for Mr. Doug Wanka of Redcliffe, the honour of taking away the Perpetual Trophy, the lovely Cleland Cup.

Champion Australian Native Specimen, an outstanding plant of about 30 cm in circumference, was *Den.* delicatum, in excellent condition and grown in a wooden slat basket, owned by Mr. G. Bloodworth, also brought down from Toowoomba.



Cattleya intermedia 'Alba'

Mr. Barry Scriven's *Cattleya intermedia* 'Alba', a mass of clean white blooms grown in a terra cotta squat container, took out the Champion Specimen orchid.

Clive Stark of the Gold Coast is well known for his expertise in growing specimen plants. At this show he tabled a specimen plant of *Lc.* Culminant 'La Tuilerie', displaying 49 blooms and more buds to open, for this effort he was awarded a special prize. Clive mentioned that during the previous week he had cut twenty one blooms from the plant.

Mr. and Mrs. D. Clarke also gained a special prize for their display of phalaenopsis orchids, whilst the most pre-eminent entry went to a display "Orchids for Appreciation" with many cut blooms of a variety of genera arranged in and around a swinging oriental style chair.

The Society meets on the second Monday in the month in the Senior Citizens Centre, McLachlan Street, Fortitude Valley. Hon. Secretary Mr. Rod Mackinney, P.O. Box 2002.

IPSWICH O.S. SPRING SHOW

Merrell's Motor Showroom of Ipswich was ablaze with colour when members of the Ipswich Orchid Society arranged their orchid display during Colour Carnival Week in the City.

There were numerous exhibits of members' plants in a "natural" setting, with Cymbidiums massed, balanced by arrangements of species and small hybrids.

Paph. Belendia x *P.* Regina gained the Champion Orchid of the Show, owned by L. and M. Heinemann.

The Most Outstanding Entry was *Angraecum violacea*, its two sprays carrying sixteen blooms. Potted in bark and peat moss in a terra cotta pot. Tabled by Pino Zerlotti.

The society meets on the first Wednesday in the month, Adult Education Centre, Brisbane Street, Ipswich. Mrs. Gwen Stumer Secretary, phone 201 0126, Mt. Crosby.

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NORTH BRISBANE ORCHID SOCIETY

The North Brisbane Orchid Society Spring Show, held in the Toombul Town Shopping Mall, again this year attracted many admirers. The quality and colour of blooms exhibited by the society's members was most gratifying to the organisers of the Show.

Champion Orchid of the Show was *Euanthe sanderana* x *V. Lenavat*, a seedling flowering for the first time, presenting a spike of eight blooms and buds to open. A nice flat bloom of rose toning, bordered by the ventral sepal and bottom portion of petals, in a rich reddish brown colour. The plant was grown in a plastic pot of bark and charcoal. Owner Mr. Dan Clark.

A mass display of orchids and foliage arranged by Dr. Harrison and Mr. I. Bentzen won this section of the Show. Champion Native, *Den. linguiforme* was exhibited on this stand.

The schedule provided for a display of six orchids by one grower. This is a class that is gaining popularity at shows. Mrs. Joan Butler gained 1st placing with a lovely display of *Phalaenopsis*.

The best large individual display was won by Mrs. J. Struthers, for her artistic expression with quality orchids and some nice foliage.

REDCLIFFE & DISTRICTS O.S.

The Spring Show, held over the second weekend in September in the R.S.S.&A.I.L.A. Hall, was another colourful spectacular of orchids — not only an attraction for orchid growers and local residents, but a feature for tourists in the area.

Great effort by the members, went into the preparation of the many mass displays, and a tiered display up to about 2.5 m of quality orchid and foliage plants by Messrs. Benson, Balkie, Howard and Wanka gained 1st placing.

Species *Phal. schilleriana*, carrying numerous racemes of blooms, owned by D. Wanka, was selected from this display as Champion species.

Champion Orchid of the Show, a well formed *Bc. Mt. St. Helen* of clear fresh pink lavender tone, took the honour for Mr. R. Turner.

The Champion Specimen, *Cat. Harmony Grous* x *C. Anzac* 'Orchidhurst', presenting approximately 34 blooms, with buds to open, exhibited by Mr. M. Carmody, attracted a lot of admirers.

The Society meets on the 2nd Wednesday in the month in the C.W.A. Hall, Cnr. Georgina and Victoria Streets, Woody Point. Hon. Sec. P.O. Box 51, Margate Beach 4031.

EASTERN DISTRICTS O.S. SPRING SHOW

This Society is one of the many orchid societies in and around Brisbane that present two shows a year, spring and autumn. Show organisers are kept busy practically all the year round, planning for such presentations, for their members and the visiting public.

A special welcome at the immediate entrance, has for many years been a feature of the show. A really engaging sight on entering the Guardian Angels School Hall in Bay Terrace was a display of orchids and quality foliage plants, backed by tall vandas and cymbidiums, colourful crotons, then down to phals, cattleyas and paphs, in a setting around a waterfall.

Champion Orchid was *Phal. Alice Gloria* x *P. Bruce Schaefer*, a raceme of eight shapely blooms and buds, grown in bark and charcoal, owner Mr. F. Ffrench.

The Section: A group of six orchids and foliage, was won by Mrs. M. Castner, who had artistically arranged tinted black plastic to blend in with the orchids.

The Society meets on the 4th Thursday in the month, in Guardian Angel's School Hall, Bay Terrace, Wynnum, P.O. Box 60. Hon. Sec. F. Geary, 48 8570.

AN ORCHID SHOW WITH A DIFFERENCE

The Queensland Orchid Species Society presented the First Species Show in the very fine Theatre Building in the new Brisbane Botanical Gardens — an ideal setting.

What a delightful show this turned out to be, for those who may have thought, "species only, impossible", would now be amongst the many who are glad that this First Species Show was presented.

The Queensland Native Orchid Society and the Brisbane Orchid Society members arranged large, and very attractive displays alongside tables filled with species orchids from all parts of the world, whilst these were supported by trade displays from commercial growers.

The Champion Orchid of the Show *Amesiella philippinense*, carrying five white shapely blooms in a plastic pot of bark and charcoal, was tabled by a junior grower, Brian Lovell.

The Champion Specimen, *Coelogyne flaccida*, a plant presenting 30 sprays of about nine blooms each, well displayed around a 10" terracotta pot, owned by Mr. M. Clench of Burpengary.

Phaius tancarvilleae, bearing a tall spike of eight blooms, well displayed, was awarded Champion Australian Native. Owner, Mrs. A. Snape of the North Brisbane Orchid Society.

ASPLEY O.S. SPRING SHOW

The venue for the not so old Aspley Orchid Society Spring Show was the Opportunity School Hall, Aspley.

In order that all members could become involved in show activities, the committee of management came forth with the idea of dividing members into six groups, each group to be guided by personnel who had taken part in some other orchid show at some time. This arrangement created much enthusiasm, and it was evident from the displays that a great deal of enjoyable work had taken place.

Champion Orchid of the Show went to *V. Jennie Hashimoto* x *V. Diana Ogawa*, a seedling flowering for the first time, grown by Mrs. Margaret Barker.

Reserve Champion was *Cym. Mary Ann* 'Simplicity', carrying three large sprays of good shape and clean blooms, owner Mr. W. Leney Smith.

The Best Specimen *Cat. labiata* carried 22 blooms, owned by Mrs. O. Jarrett provided a good talking point for many admirers.

The Toowoomba Orchid Society

E. H. MILES

The Toowoomba Orchid Society staged their Spring Show at the Myer Roof-top Car Park (by courtesy of that firm) during the Carnival of Flowers, 17th-23rd September. "Silver Jubilee" was the theme of the setting. The centre feature was a golden coach leaving the palace. It was richly decorated and ornamented with gems and jewels and lined with velvet.

Behind the arches were sections of colourful cymbidiums. The most popular of these displays was "The three distinct colours" where the loveliest and latest hybrids were shown. A charming arrangement of miscellaneous orchids giving colour and harmony formed a corner piece.

The show of natives was superb. Many well known favourites were to be depicted among the fragrant pastel shaded flowers. The Darling Downs Group of A.N.O.S. contributed a showing of their natives which were beautifully arranged.

Mr. N. Douglas exhibited the Champion Orchid which was *Cym. Wallara* 'Gold Nugget'.

The Reserve Champion was *Cymbidium* San Francisco 'Meadow Mist' exhibited by Mr. D. Ratcliffe, as was the Champion Specimen *Cymbidium* Ispahan 'Mascot', and Champion Specimen Australian Native was *Dendrobium falcorostrum*.

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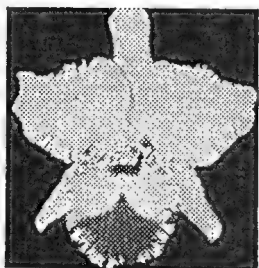
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LAUNCESTON O.S. SHOW

The Show was once again held in the Masonic Hall, Brisbane Street, from 7th-9th October inclusive. This year our show dates co-incided with the Annual Agricultural Show. Some members felt this would be detrimental to our attendance, but in fact, it was an asset, as our Orchid Show was patronised exceptionally well, not only by the Launceston public but also by the large number of visitors from out of town.

The Grand Champion award (Tas. O.S. Bronze Medal) was won by Mr. L. T. Clark with his plant of *C. Balkis* 'Compact', a truly lovely plant, well flowered. Reserve Champion (S.A.O.C.) Bronze Medal was taken out by Mrs. D. Scott, with an excellent spike of *C. Wallara* 'Gold Nugget'. The surprise of the Show came from one of our Novice Members, Mrs. Toni Harvey, who was exhibiting for the first time. She took five first awards including the A.O.C. Certificate for most pre-eminent entry with a plant of *Coeloglyne cristata*, a beautifully grown plant with a mass of flowers of good quality and texture. No doubt this will stimulate the enthusiasm of our novices for future years.

Two of our Mainland Nursery friends further enhanced our Show with their generous donation of blooms for exhibition, and, to them, the society gives grateful thanks.

W. M. Scott (Vice President)

NORTH WESTERN TASMANIAN SHOW

The O.S. of North Western Tasmania report a very successful Spring Show. The Grand Champion was *Cymbidium* Levis Duke 'Belle Vista', owned by Mr. and Mrs. P. Jackson. Reserve Champion went to a well grown *C. Cleo* Sherman 'Wanda', belonging to Mr. and Mrs. Barry Dudman. Mr. L. Knott proved once again the dramatic appeal of a well grown specimen by gaining the Most Pre-Eminent Entry Award with his *Dendrobium speciosum*. Mrs. L. Halfacre is to be commended for her attractive one square metre display. The class for four square metres going to Mr. J. Cannon. Mr. and Mrs. Jackson won the class for a six square metre display, and also the award for Most Outstanding Display of the Show.

LISMORE SPRING SHOW

Lismore is Queen City of the far N.S.W. north coast, and in the City Hall the Lismore Orchid Society puts on a fine show each September. This year the high standard of exhibits made judging difficult for Mr. Sid Waldie of Sydney.

Grand Champion was a *Dendrobium* owned by Mr. and Mrs. Saunders, and Reserve Champion went to *Cymbidium* Narella 'Jennofer Gold', owned by Mr. F. Lancaster.

Mr. and Mrs. F. Smith benched a fine *Lc. Culmiant* 'La Tuilerie' and reaped the reward of Champion *Cattleya*. An award for Champion Novice was won by Mr. and Mrs. H. C. Elford with a *Dendrobium speciosum*.

Coming up

Faster than you think! So plan now.

Ninth World Orchid Conference. January, 1978. O.S.N.S.W. tour is full. Others have a few vacancies. Contact your State Secretary.

N.S.W. Fourth Regional Conference. Katoomba. Hosted by Blue Mountains and District O.S. Show from Friday, 29th September through to Monday, 2nd October.

Sixth Australian Orchid Conference. Tasmania. October, 1979.

First N.Z. Orchid Conference. Auckland, N.Z. October, 1980.

SUB-TROPICAL ORCHID COUNCIL

The Sub-Tropical Orchid Council of Queensland is an association of the Bundaberg, Maryborough, Gympie, Nambour, Maroochydhore, Caloundra, Caboolture and Glasshouse Country Orchid Societies.

At a recent quarterly meeting the Sunshine Coast Orchid Society of Caloundra hosted the gathering and Council delegates, together with members from the other societies, were greeted and welcomed by Mrs. Myra Avery, Caloundra president.

Special guests for the day were Mr. Phairot Lenevat of Bangkok, Thailand, and Mr. Kevin McFarlane of Cairns. Both guests discussed their growing methods and showed slides of their recent hybrids.

Mr. Lenevat praised the wonderful display of orchids. Mr. Ossie Grainger won the popular vote with a fine plant of the cross *Cattleya bowringiana* x *Laelia milleri*.

N.O.S. OF S.A. 102 NOT OUT

The Native Orchid Society of S.A. was only formed early this year, yet in the seven months to September it had achieved a membership of 102. The Society has organised several field days and issues a very readable monthly bulletin.

A POINTER

In a lecture at the Townsville O.S., Mr. Bill Golding said that a cross worth buying is *Epicattleya* Green Gem. The parent plants are *Epidendrum mariae* x *Cattleya walkerana*.

SHOALHAVEN'S TRAGIC LOSS

Shoalhaven Orchid Society's famed foundation member and patron, Mrs. N. J. Rodway, O.B.E., of Nowra, passed away in her 95th year. This fine lady supported the Society as an exhibitor and helper until just a couple of years ago. She never missed a show.

Her death is a great loss to the Society, the town and district. Sympathy is extended to her family.

LAST TRIBUTES

The late Mr. Dan O'Brien was a foundation member of the Shoalhaven Orchid Society and in spite of moving to Berowra 15 years ago he maintained an interest in this Society.

He was also an active member of the Berowra Orchid Society where his gentle and always helpful attitude was appreciated by all.

The late Mr. James Gamble will be missed by members of N.S.W. and Queensland societies. He gave distinguished service as President of both Lismore and Byron District Orchid Societies, and travelled regularly to meetings of the Gold Coast Orchid Society.

The late Mr. W. Palmer, "Bill" to his many friends, was probably the last of the old time growers. His interest in orchids dates back to the days when there was no orchid society in N.S.W. He was a World War 1 veteran. Although of late years his growing was on a reduced scale he maintained attendance at most meetings of the Orchid Society of N.S.W. and the Western Suburbs Orchid Society. He was a foundation member of the latter. Last year he visited Europe and at a slide showing of nurseries visited, he amazed members of the Western Suburbs O.S. with his remarkable memory of places and plants, and anecdotes of people he had met.

Sympathy is extended to the relatives of the above gentleman.

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His little, nameless, unremembered acts
of kindness and love. — Wordsworth.*

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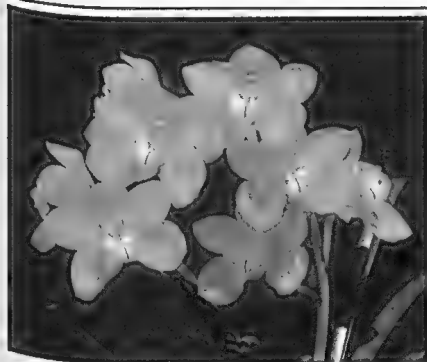
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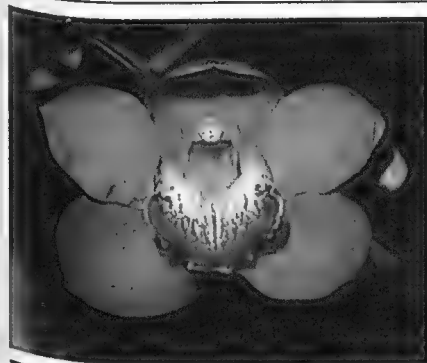
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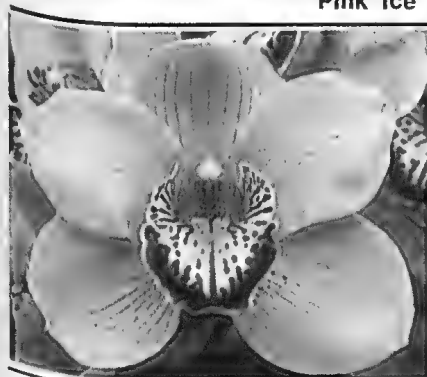
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Volume 43, No. 1

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	jamesianum	\$10.00		blanchettii	\$12.00
	moschatum	\$10.00		chelophorum	\$10.00
	pierradii	\$10.00		excavatum	\$12.00
Helcia	sanguinolenta	\$12.00		harrisonianum	\$12.00
Hexisea	bidentata	\$15.00		jonefianum	\$12.00
Laelia	bradel	\$12.00		marshallianum	\$15.00
	briegerii	\$12.00		sarcodes	\$12.00
	caulescens	\$12.00		spilopocrum	\$12.00
	cinnabarina	\$12.00		splendidum	\$12.00
	crispa	\$15.00		tigrinum	\$10.00
	crispilabia piedade	\$15.00		varicosum	\$15.00
	escalqueana	\$12.00		wentworthianum	\$10.00
	filedensis	\$12.00	Peristeria	elata	\$12.00
	flava	\$12.00		laeta	\$12.00
	grandis	\$18.00	Paphiopedilum	barbatum	\$12.00
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Lycaste	brevispatha	\$12.00		occulata	\$10.00
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Plus many more of too few to list. Write for our complete catalogue.
A charge of \$2.00 is made for packing and \$1.00 for Health Certificate
where applicable. Please include 'phone number on your order.

WILLANDRA ORCHID CO. PTY. LTD.

P.O. BOX 90, DEE WHY, N.S.W. 2099

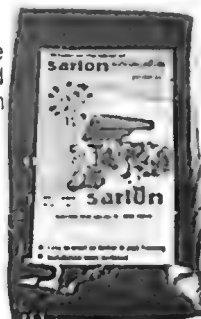
“Whatever the weather Sarlonshade protects”

The illustration features a cheerful sun character with a face, wearing dark sunglasses and holding a large roll of Sarlonshade fabric. The sun is positioned above stylized clouds. A small bird is flying near the sun. Below the clouds, there is a garden scene with various flowers and a Sarlon Garden Pagoda structure, which is a dual-function shade/hot house for garden or patio use.

Sarlon Garden Pagoda is a dual function shade/hot house for garden or patio. A compact nursery for gardening enthusiasts. Just change the cover and your shadehouse becomes a hot house. Available in 4 sizes.

Sarlonshade: Plants and flowers grow better under Sarlonshade as it controls shade, reduces evaporation, minimises hail and frost damage and mists the rain. Sarlonshade is a tough, yet lightweight woven fabric, designed to give long lasting outdoor protection. Sarlonshade is inexpensive and simple to use. 5 degrees of shade – 32%, 50%, 70%, 80%, 92%.

Sarlonshade is available by the metre 183cm wide, prefabricated covers or in handy carry packs 3m or 6m x 183cm.



For further information contact Sarlon in your state.

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SUNSHINE ORCHID NURSERY

MS649	DEN. YUKIDARUMA KING A/M JOS	Heavy substance white soft cane with bronze lip. Divisions of this show bench clone approx. 2 ft. high. 5½" pot	\$20.00
MS650	DEN. GOLDEN BLOSSOM 'KOGANE' A/M AOS	Stem propagations approx. 9" high in 4½" pots. A beautiful golden yellow show bench soft cane	\$15.00
MS651	DEN. MALONES 'FANTASY'	Stem propagations of this well known show bench clone approx. 9" high in 4½" pots. Lavender with white and yellow throat	\$15.00
MS652	DEN. MALONES 'EMPEROR'	Another well known variety of this show bench soft cane. Approx. 6" to 8" high in 4½" pots	\$15.00
MS653	DEN. MALONES 'OKAYAMA'	Another similar show bench clone. Approx. 6" to 8" high in 4½" pots	\$15.00

Sunshine Orchids are now agents for:

PHAIROT LENAVALT'S ORCHIDS of Bangkok, Thailand

We chose this agency because Phairot Lenavat seems to have the most progressive breeding programme in the Vanda family today, and we confidently expect many of his latest crosses to win prizes on the show bench to add to his past successes.

RIGHT NOW WE CAN SUPPLY FLOWERING SIZE PLANTS OF THE FOLLOWING CROSSES

@ \$17.50 each. All are well established in TEAK BASKETS.

(These vandas are not big rambling plants, average height is 12 to 18 inches.)

- PLS. 1 V. SATTA x V. LENAVALT — variations of pink to buff-coloured blooms.
- PLS. 2 V. PRINCESS BLUE x V. JOAN ROTHSAID 'OBHA' A/M RSPC — many blues.
- PLS. 3 V. DIANE OGAWA x V. JOAN ROTHSAID 'OBHA' A/M RSPC — orange to pink-lavenders.
- PLS. 4 V. AURAWAN x V. SATTA — many buff to yellow.
- PLS. 5 V. THANANCHAI 'LENAVALT' x V. AURAWAN 'LENAVALT' — buff to yellows.
- PLS. 6 V. CAROLYN KOSHIRO x V. SUN TAN — blues to pink-lavenders.
- PLS. 7 V. ROTHSCILDIANA x V. SUN TAN — pink-lavenders to blues.
- PLS. 8 V. LENAVALT x V. EISENSANDER — large pinks.
- PLS. 9 V. LENAVALT x V. ROTHSCILDIANA — many large blues to blue-lavenders.
- PLS. 10 V. LENAVALT x ONOMEA 'LENAVALT' — good shape pink-lavenders.
- PLS. 11 V. TOTSAPHON x V. SUN TAN — deep pinks.
- PLS. 12 V. CHOOSRI — dark maroon to lavenders.
- PLS. 13 V. THANANCHAI x V. JOAN ROTHSAID 'OBHA' A/M RSPS — pale pinks to yellow.
- PLS. 14 V. SANDERIANA x V. LENAVALT 'OBHA' — dark strawberry blooms — large.
- PLS. 15 V. LENAVALT x PATOU — light to dark pinks.
- PLS. 16 V. PATOU x SUN TAN — deep pinks to reds.
- PLS. 17 V. LENAVALT x V. COERULEA A/M RSPC — blue to blue-lavenders.
- PLS. 18 V. ONOMEA x V. SUN TAN — many will be blue to blue-lavender.
- PLS. 19 V. KAREN ONO x V. SUN TAN — orange to deep pinks.
- PLS. 20 V. SINARD x V. THANANCHAI 'LENAVALT' — yellows.
- PLS. 21 V. VALAI x V. LAUREL YAP — many will be blue.
- PLS. 22 V. HILO QUEEN x PATOU — pink to blues.
- PLS. 23 V. SANGARTHIT x V. JOAN ROTHSAID 'OBHA' A/M RSPC. — various shades of pink.

We also have a very limited supply of selected plants that have flowered, together with colour prints of their flowers. These are \$68.00 each and are also well established in teak baskets . . . they are mainly in strawberry to pink shades.

Sorry we cannot post these prints away as we have only one copy.

Please add allowance for freight, or we can consign freight to pay at your end.

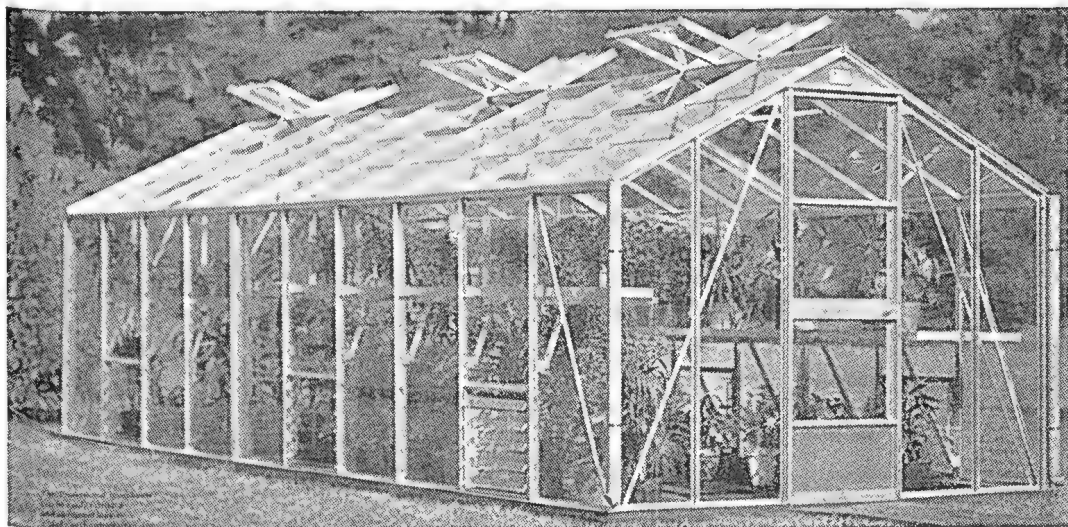
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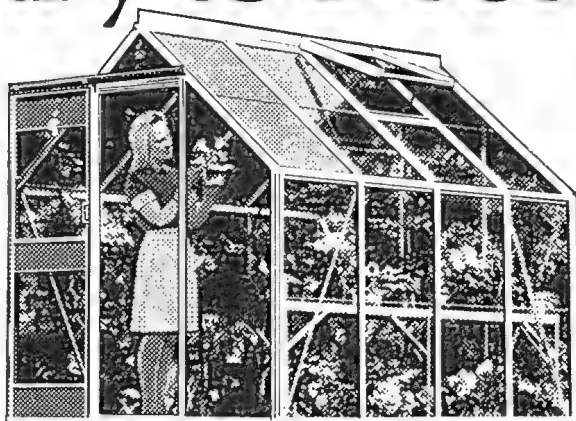
Trade enquiries welcome.

Victoria: Glasshouse Constructions, 977 North Road, East Bentleigh. Tel.: (03) 57 6718

BACO and Cambridge glasshouses are well worth looking into

Eden has the ideal season for Orchids: January to December

Because you control the temperature in your Eden glasshouse, you choose your season. An Eden glasshouse can be heated or unheated—even divided into hot or cool sections.



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Eden glasshouses feature space-saving sliding aluminium doors, roof ventilation, full-length glazing for maximum use of sun's rays and a superb clip-on system to secure panes

NEW IN AUSTRALIA

They're top sellers in England, Europe, America and New Zealand—and now Eden domestic aluminium glasshouses are in Australia! The design and quality materials tell you why they're world leaders...are included in the prestigious London Design Centre Index, and all carry a lifetime guarantee: they won't rot, warp, or rust.

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Summer comes when you want it! The Eden glasshouse controls temperature, moisture and ventilation, protects against moisture drips. And, most importantly, you can easily install heating—even dividing the house into hot and cool sections. Use your glasshouse to grow seedlings until they're strong enough to grow outdoors—and to keep your prize blooms clean and protected.

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Your new orchid home comes in all sizes from small garden frames and lean-to's to fully equipped glasshouses that extend to any length as your garden grows. Even a choice of widths to to suit your space. They're easy to erect, easy to dismantle for re-siting. The sections simply bolt together and onto your base in a rigid framework.

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Your Eden glasshouse is available right now. The no-obligation coupon below will bring you a full colour brochure detailing sizes and designs, plus price-list and a comprehensive guide to glasshouse gardening.

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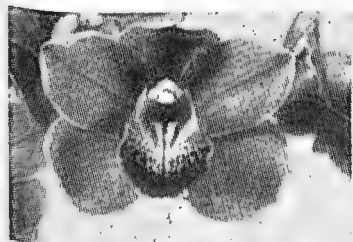
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Hamsey 'The Globe'
AM/RHS



Hamsey x Wallara
'Hove'



Harry Shepherd
'The Prize' HCC/AOC

We are pleased to be able to offer for your selection, flasks of cymbidium seedlings (each containing approximately 25 plantlets); all of which we intend to grow on for our own cut flower market and future showbench winners.

The use of colchicine to convert the ploidy of already known clones and seedlings in their protocorm stage is now well known. However, on checking the offerings being made throughout the world, very few nurseries appear to be offering these colchicine-treated seedlings for sale. The use of colchicine is going to create many beautiful converted tetraploid clones in the next four to five years which we feel, of necessity, will surpass their diploid parents in most departments.

The flask crosses offered are set out below with the price per flask also indicated. (N.B.: freight extra). Flask orders will be received on one-third deposit.

NEW FLASK OFFERINGS

N.B.: The letters '+C' indicate that the seedlings have been colchicine-treated.

- | | | |
|------|--|---------|
| 761 | KATHY LOVELL 'YOWIE BAY' x SLEEPING NYMPH 'HOVE' | +C \$50 |
| | Expected to produce 100 per cent July/August green and gold pure colours with striking lips. | |
| 763 | KATHY LOVELL 'YOWIE BAY' x ZUMA BOYD 'YOWIE BAY' | +C \$65 |
| | Show bench July/August greens and some yellows are expected of award shape; depending on whether the Zuma Boyd carries the pure colour factor, a percentage could be excellent shaped pure colours. | |
| 765 | WYANGA 'KADO' x KATHY LOVELL 'YOWIE BAY' | +C \$50 |
| | Reverse of 762. 100 per cent pure colours. Expecting beautifully displayed lips. | |
| 766 | WYANGA 'KADO' x ZUMA BOYD 'YOWIE BAY' | +C \$50 |
| | The possibility of a percentage of pure colours. Predominantly an early green, but cross expected to produce fine shaped early cymbidiums. | |
| 769 | (KEERA x KALANG) 'HOVE' x BALTIC 'LEEANNE SESSIONS' | +C \$50 |
| | Expected to produce June pink diploids and tetraploids for show and export and future freeing, in both the diploid and tetraploid forms. | |
| 7612 | LUNAGRAD ELANORA x BALTIC 'LEEANNE SESSIONS' | +C \$50 |
| | June greens and pinks of clear colouration. Good flower count in both diploid and tetraploid form. | |
| 7613 | (HAMSEY 'THE GLOBE' x WALLARA 'GOLD NUGGET') 'HOVE' x CLEO'S MELODY 'CANARY' | \$60 |
| | Both tetraploid parents carry good yellow colouration and pleasing form. Expected to produce rare and award shaped yellows in August and September, with some whites and pinks as a bonus. | |
| 7617 | HARRY SHEPHERD 'THE PRIZE', HCC/AOC x HAMSEY 'THE GLOBE', AM/RHS | \$40 |
| | Expected to produce white, pink and burgundy tetraploids of award shape and substance. Keep in mind that Harry Shepherd 'The Prize', even though a white, genetically has pink to rose colouration in its genetical make-up. | |
| 7626 | OISO x SHOWGIRL 'JULIE CHRISTIE' | \$50 |
| | Two miniatures combining, which we expect to produce white, burgundy and pink miniatures of upright spike habit and high flower count. | |

If you wish to receive our full flask catalogue please let us know by providing us with your name and address.

Quantity Discount: (A) Orders exceeding \$200 — 10 per cent Discount; (B) Orders exceeding \$500 — 25 per cent Discount provided payment is received within 20 days of invoice.

LUGARNO ORCHID CO. PTY. LTD.

Agents for Shaffers Orchids in Australia and McBeans Orchids in N.S.W.

Full Range of Mericlones — Seedlings — Cymbidiums — Phalaenopsis —
Cattleyas — Paphs. ("Ratcliffes")

MERICLONES

Cymbidiums — Cattleyas — Miniature Cymbidiums "McBeans"

NEW LISTS AVAILABLE

Please send 30 cent stamp addressed envelope.

AVAILABLE NOW

COMMUNITY POTS OF CATTLEYAS — 10 plants

Bowringeana v. Harwoods x Lee Langford 'Pacific Sun' — Bifoliate — all colours \$20.00

Sylvia Fry 'Supreme' x Hertha Wondabah — few left — limited \$25.00

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Malworth 'Orchidglade' F.C.C. 2" Pots \$7.50: 3" Pots \$12.50

Fortune 'Spellbound' 3" Pots \$12.50

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Betty Conroy x Gladys Read 'Snow Queen' F.C.C. \$25.00

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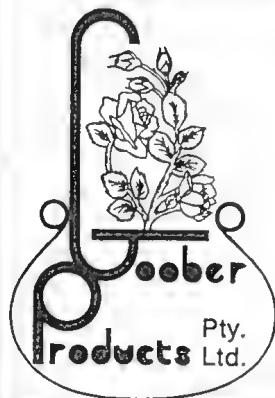
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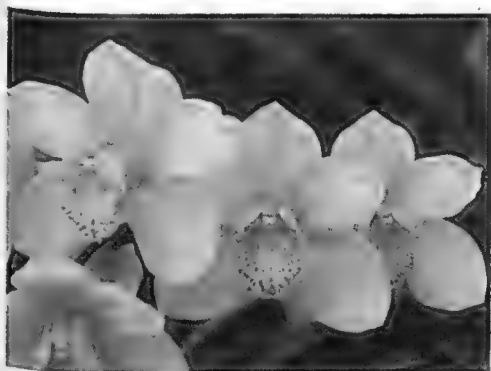
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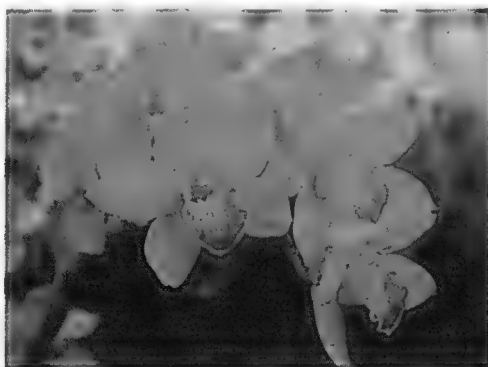
Telephone: 561-3636

WHERE PARENTAGE COUNTS



SYLVANIA 'SONNET'

Early pink tetraploid parent. Show bench standards have appeared in each of its crosses to date.



CORAKI 'NORAH'

See our mailing list mericlone flasks for details of this fine vibrant gold.

Sylvania 'Sonnet', like the brush of an artist imparts form and beauty to its progeny. According to its cross, so its seedlings vary in flowering time and colour to give reds, soft pinks and whites from June to September. The labellums also vary from deep velvet red to outright concolour.

A carefully planned set of Sylvania 'Sonnet' crosses in flasks of 50 planted is offered at \$27.50 each.

- 7708 Sylvania 'Sonnet' x Terama 'Red Eagle'. A fine form red late June Terama with massive production is used to give vibrant reds and pinks in June and July.
- 7707 Sylvania 'Sonnet' x Baltic 'Leanne Sessions'. Probable tetraploid Baltic. June and July soft aesthetic pinks.
- 7709 Sylvania 'Sonnet' x Sensation 'Vieux Rose'. Sensation 'Vieux Rose' has proved its worth as a parent for fine reds. A real class cross for July.
- 7718 Sylvania 'Sonnet' x (Sheba x Stanley Fouraker) 'Avalanche'. 'Avalanche' is large, flat, 1½" petals, large labellum edged with red. For that new standard in early pink and white tetraploids this is the cross.
- 7715 Sylvania 'Sonnet' x Rathel 'Red' is beautifully tailored; white edged red petals, white labellum with red vee. For bright contrast reds and pinks in August and September.

**FOR A FULL RANGE OF OUR CROSSES, SEND FOR MAILING LIST NOW OUT.
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Phone: Nursery 668-9374 (attended Fridays) A.H.: 522-0405 (about 7.00 p.m. Mon. to Fri.).
Nursery open Friday (all day), Saturday morning.

SOME NEW RELEASES from our new 1977/78 Catalogue

SEEDLINGS IN 2" POTS AT \$2.00 EACH

- 1219 CATASETUM PILEATUM x OERSTEDII**
This is going to be very interesting as we have crossed the large flat C. pileatum with one of the 'Helmet' types. Colour will be in the green tones. Autumn flowering. Warm.
- 1161 DENDROBIUM (ANNE MARIE x FIONA) x ADELE FORTESCUE**
Prospects here are for good yellows of fine form. Spring.
- AB97 ONCIDIUM LANCEANUM x SELF**
A selfing of a particularly fine clone. Flowers large, fragrant, sepals and petals yellow, shaded with green, spotted with chocolate brown, lip rose purple. Warm grower. Summer.
- 1236 PERISTERIA ELATA x SELF**
A robust-growing plant with leaves 2 to 3 ft. high. Spike to 6 ft. with many 3" waxy white flowers. An endangered species. Warm grower.
- 1180 STANHOPEA ECORNUTA x WARSCEWICZIANA**
This one will be warm growing in a shady position. Medium sized pale yellow flowers in late summer.

NEW CATTLEYA MERICLONES AVAILABLE IN SIZE B = 4" TALL

- | | | |
|---|---|---------|
| DGO LC. DORSET GOLD 'ORCHIDHURST' AM/RHS | Vivacious yellow. Dark purple lip | \$12.00 |
| KA BLC. KEBIR 'LA TUILERIE' | A prolific Spring flowerer. Medium lavender with very deep purple fringed lip | \$8.00 |
| AGO LC. AMBER GLOW 'OLAA' AM/AOS | Beautifully shaped flowers of pure deep yellow with contrasting velvety lip. Very heavy substance. Autumn | \$12.00 |

FREIGHT and any D.P.I. Inspection Charges will be billed separately.

SEEDLINGS — We can now offer a very wide range of orchid seedlings in most genera including:—

CATTLEYA — CYMBIDIUM — VANDA
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ALL PROCEEDS GOING TO THE AUSTRALIAN ORCHID FOUNDATION.

These flasks will also be available from Frank Slattery in Sydney and Hodgins Orchids in Melbourne.

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OUR NURSERY (AERIAL VIEW ABOVE) OFFERS THE LARGEST DISPLAY OF QUALITY ORCHIDS TO BE SEEN, FOR YOUR INSPECTION. LISTS OVER 100 SEEDLINGS OF PAPHIOPEDILUM, CATTLEYA, MISCELLANEOUS GENERA AND THE BEST RED, YELLOW AND PURE-COLOUR CYMBIDIUMS AND JUST RELEASED MINIATURE CYMBIDIUM SEEDLINGS.

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Every Day
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ON REQUEST POST FREE.

NEW EXCITING MERICLONES

The following in very limited supply:—

Bic. 2070 Bic. Victoria 'Blue Bird' HCC-AOS — seven flowers per spike — a near concolour blue. 2"	\$7.50
Den. Circe 'Gail' AM/AOS-HOS — large deep purple. 2"	\$7.00
Holt. Loke Tuck Yip — prolific deep cranberry red full sun. 3"	\$14.00
Aranda Kooi Choo — pretty blue. 3"	\$14.00
Den. antennatum x canaliculatum — prolific sprays, white and green. 2½"	\$13.00
Aranda Lucy Laycock x Ren. storiei — long sprays, brilliant red. 3"	\$14.00
Den. Spellbound 'Viro' AM/OST-RHT — white-purple lip. B/S	\$25.00
Den. Tomie — pink with darker pink lip. B/S	\$18.00
Den. Field King 'Tung Laung' — yellow red lip. F/S	\$25.00
V. Princess Blue 'SS107' — deep blue. 3"	\$15.00
V. Rothschildiana 'South East Breeze' — one of the deepest blues. 3"	\$18.00
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Den. Bhodi Ngung — sprays amethyst to violet. 3"	\$18.00
Den. lasianthera syn. ostrinoglossum x Roy Anderson — long-lasting sprays, deep violet with brown antelope type. F/S	\$13.50

PAPHIOPEDILUMS — 2" POTS \$13.50

6475 Paph. Chivalry 'Compton' x Personality 'Courage' — heavy spots.	
6443 Paph. Dazzler 'Makeup' x Qantas 'Longshank' — spotted.	
B334 Paph. Van Ness x Tangold — yellow/amber.	
6425 Paph. Personality 'Henry' x Lyric 'Fireball' — spotted.	
77169 Paph. Beneden 'Clark Day' x Bourneva 'Majestic' — reds.	
77153 Paph. Vertillario x Winston Churchill 'Indomitable' FCC-AOC — spotted.	
77163 Paph. Alison Jensen 'Dukes Edge' x Stoke Poges 'Nora' — spots or brush.	
77196 Paph. Lucid 'Picardie' x Redezelle 'Betty' AM-AOS — reds.	
77331 Paph. (Lady Dillon x Erjide) x Red Splendour — reds.	
77333 Paph. Happy Tweed x Tommie's Delight 'Bright Day' — yellow/green.	
77003 Paph. Betta Anna 'No. 1' x Tommie Hanes 'Summer Sunday'.	
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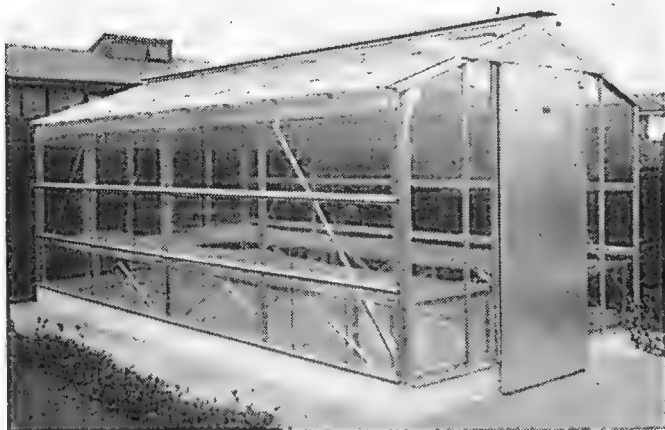
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Australian Orchid Review

MARCH, 1978

VOLUME 43

No. 1

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Australia: Aust. \$6.00 per annum.

Overseas: Surface mail Aust. \$8.00 (U.S. \$11.00) per annum. Airmail Aust. \$14.00 (U.S. \$18.00) per annum.

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COVER STORY

Because of the wide range of genera in the Australian display at the Ninth World Orchid Conference in Bangkok it attracted considerable interest. It was set up under difficulties by Messrs. Lou Sasso and Ian Chalmers, ably assisted by Mrs. Maude Tyler. It was awarded a Conference Medal by the judges. The display was wider than shown but other film was not processed in time to allow a wider selection of transparencies. Conference photos in this issue by Ronald Kerr.

NINTH WORLD ORCHID CONFERENCE

Splendid Hospitality of the Thai People

RONALD KERR

Around 200 Australians attended the Ninth World Orchid Conference in Bangkok, Thailand, during January, 1978.

For the first time at an overseas conference each State had its own contingent, while Sydney's North Shore Orchid Society mustered enough support for its own tour.

The N.S.W. party left Sydney 57 strong and was regrettably depleted of Bill and Hellen Smoothey at Penang, then joined by Lou Sasso in Bangkok. West Australia had over 20 representatives, and Victoria and Queensland nearly 40 each. South Australians dominated the official A.O.C. party which had over 30 members.

Precise numbers from each State were difficult to obtain because many travelled independently and a few Tasmanians were in some parties.

Poor Hellen Smoothey, who has struggled gamely with arthritis for years, broke a hip bone in Penang after quite a simple fall and had major surgery there. It was a great disappointment for Hellen and Bill. A loss too, for the Conference where Bill had important roles he was unable to fulfil. Helen's surgery was a success, albeit painful, and she is now on the mend.

Most Australians went to the Singapore Botanic Gardens on the way to, or coming from, the Conference. Many considered the Gardens to be the highlight of Singapore. The Gardens orchid display is worthy of its proud tradition. Over the years more than 1,000 crosses have been registered by the Gardens, and the groundwork laid for a commercially viable orchid industry in Singapore. Current emphasis is on conservation rather than hybridising and Mr. George Alphonso, the Director, is a world authority on the conservation of orchid species.

Bangkok is a huge sprawling city of five million people, with a traffic problem worse than Sydney or Melbourne. It is a city of surprises, of beggars and billionaires, eating places ranging from sidewalk charcoal braziers to palatial restaurants, shanties and palaces.

Hotel Siam Intercontinental where the

N.S.W. party stayed must be one of the best hotels in the world. It was a little too far from Conference headquarters at the Dusit Thani Hotel for easy intercourse. Both hotels are over 30 kilometres from the riverside Rose Garden which otherwise was a splendid setting for the Show. I was in one bus which took three hours to make the journey. Bumper to bumper all the way.

The Show was arranged in naturalistic fashion among the trees of the Rose Garden. Local societies and nurseries created magnificent displays, with dendrobiums and the vandaceous alliance predominating. A feature was the massing of 20 or 30 clones of the same hybrid, or mericlones of the same orchid, around a tree or as the background for a display.

Late arrival of flowers due to airline troubles gave Australians only two hours on judging morning to erect the display. Most Australians were then on various tours and the work was very ably done by Lou Sasso, Maude Tyler and Ian Chalmers.

Our display attracted a medal from the judges and considerable attention from among huge crowds of visitors. It stood out because it contained a wide range of genera and made effective use of a handy tree.

A few nice cymbidiums from America and England proved a novelty to local people.

Commercial orchid growing is big business in Thailand and there are many fine nurseries. The leaders are very advanced technically and culturally and a visit to them is a stimulating revelation.

A rung or two below these are the cut flower nurseries which grow only mericlones of hybrids such as *Dendrobium* Pompadour, *Vanda* Rothschildiana or *Aranda* Wendy Scott, *A. Christine* and *Arachnis* Maggie Oei. Flower export is handled by a well-organised co-operative.

The hybridisers know their values and plants of award standard are priced at around \$2,000 to \$4,000. However, seedlings and flasks from awarded parents are relatively cheap.

One of the many beautiful displays at the Ninth World Orchid Conference show staged in the Rose Garden, Bangkok. This was staged by a group of Thai growers, but all the Thailand Orchid Society and commercial displays were of the same high standard. Vandaceous orchids and dendrobiums predominated in these displays, many with stronger colours than those pictured.



Scenes at Bangkok, January 1978



A view of one seller's array of Thailand bush orchids spread over the footpath adjoining the week-end market. Mr. Wal Upton of Sydney is pensively casting an eager and eagle eye over the species looking for further additions to the plastic bag of purchases in his hand.



Two species to grow

Epidendrum nemorale

▲ One for every collection. Most nurseries with a good range have it or can get it for you. It is showy, fragrant and long lasting and flowers can be 100 mm wide but generally smaller. Pseudobulbs are fat and up to 100 mm long, topped by 300 mm long slender leaves. The flower stem grows to 900 mm. It comes from the high altitudes of Mexico and is adaptable to cattleya culture. Flowers in summer.

Oncidium Rastatum

▲ Not so readily available as *E. nemorale* but worth finding. The floral parts are unlike most oncidiums and originally it was not classed as one. Tepals are brown with yellow green bars. The lip is markedly three lobed, the middle lobe red on top and greenish yellow at apex. Pseudobulbs are fat with oblong-lanceolate leaves to 250 mm. Grow under same conditions as other oncidiums.

Photos courtesy of G. Hermon Slade.

Our Thai friends entertained us well. The Conference opening and cocktail party at the Rose Garden gave a splendid opportunity to fraternise with world growers in a pleasant atmosphere. The Conference dinner was also held there in the open air with a most satisfying blend of Thai food and entertainment. Thai classical dancing is a delight. Based on folklore it is danced to stirring percussion rhythms. The country's finest dance troupe performed for us at a Thai night and dinner given at the Dusit Thani. This company would equal in standard any of the famous ballet companies of the western world.

Part of the entertainment was acrobatic mock fights between swordsmen, each with two swords, and between a man with a staff and one with wooden bars fastened to each forearm. They were realistic and dramatic.

T. Orchids hosted Australians one evening at their city nursery with appetising Thai food and entertainment. The paths of most Australians came together here. North Shore President Gordon Lowndes did a fine job of thanking the management on our behalf.

I was astounded and saddened during a trip to the Meo hill tribe near Chiang Mai to see opium poppies growing. These are the cash crop of the hill tribe peoples. Perhaps the most dramatic item of the Conference period was the audience given by His Majesty the King of Thailand to Mr. Merv Dunn, as reported in this issue.

Thailand is well called the "Land of Smiles" and in spite of ten days there we all left feeling there was more we would like to do and see. Still, the delights of Hong Kong, Taipei and Manila loomed for us in the N.S.W. party.

All our party were not from N.S.W. but included a few from other States whom it was pleasant to meet. Also Ken and Rosemary Lloyd from New Zealand. Len reminded me that the New Zealand Orchid Conference would be held in 1980. I hope a goodly number of Australians will be there.

CENTRAL QUEENSLAND ORCHID COUNCIL

Judging classes commenced last year at Rockhampton under the guidance of tutors John Maughan and Athol Bennett from Bundaberg. A series of lectures will lead up to an exam in July or August next.

Participants need not sit for the exam but all will gain a greater appreciation of orchids.

Five Gladstone members journeyed all the way to Rockhampton for the first class in October. This covered a full week-end.

FIRST N.Z. ORCHID CONFERENCE OCTOBER, 1980

As briefly mentioned in your December 1977 issue, New Zealand is to hold its First Orchid Conference in October, 1980. The North Shore Orchid Society (Auckland) will be hosting the Conference on behalf of the Orchid Council of New Zealand.

The venue is to be the Ellerslie Racecourse, and the dates of the 4-day Conference, and our first-ever National Show are 16th-19th October.

Proceedings will actually open on the evening of Wednesday, 15th October, with a cocktail party for registrants. A closing banquet is scheduled for Saturday, 18th October, and on one of the intervening evenings you are invited to the unique experience of a Maori hangi.

Auckland is ideally situated for an Orchid Conference, as many of our scenic attractions such as the Bay of Islands, the Waitomo Caves, and the Rotorua Thermal areas are all within a few hours drive. Ellerslie Racecourse itself, is just on the outskirts of Auckland City and is justly famous for its gardens as well as having ample accommodation in the immediate environs.

Day trips from Auckland during the Conference, or immediately following it, will include a tour of our vineyards in the Henderson Valley, and the Waitakere Ranges where N.Z. native orchids flourish (as well as several of our prominent cymbidium growers). We also hope to cater for visitors who would like to visit the Pukeiti Rhododendron Trust on the lower slopes of Mt. Egmont, some 220 miles away — when rhododendrons and azaleas may be seen in the height of their flowering season.

It is certain that a large contingent from our Society and others will be joining you in Hobart next year, and we will all be endeavouring to persuade you to pay us a return visit in 1980.

Our permanent Conference Committee will be keeping all your Societies informed of arrangements as they are formulated, as will Air New Zealand, who have agreed to act as our official carriers.

In the meantime, our good wishes for a successful orchid year, and we hope you will be able to keep October, 1980 free for a visit to us in New Zealand.

Beverley O'Dowda,
Convenor, Publicity

First N.Z. Orchid Conference.

TROPICAL QUEENSLAND ORCHID COUNCIL

Queen's Birthday Conference

This year's T.Q.O.C. Conference is hosted by the Mackay and District Orchid Society.

Dates are Friday, 2nd June to Monday 5th. Orchid growers from any State will be welcome as registrants. An excellent programme has been arranged. T.Q.O.C. hospitality has become renowned over the last twelve years and Mackay is working hard to maintain the tradition.

For full details write to The Secretary, Mackay and District O.S., P.O. Box 776, Mackay, Queensland 4740.

The first quarterly meeting for 1978 of the Council was held on February 18 last at Mrs. Ashman's farm, Delta. The Bowen Orchid Society hosted the meeting, and a smorgasbord tea at the Bowen R.S.L. Hall. On the next day, Sunday, delegates and observers participated in a Field Day featuring a round of many of the fine Bowen collections.

The King's Orchids

MERV DUNN

High up in the Tambon Pongyaew Mountain mists at Mae Sa Mai in the Mae Rim District of Chiang Mai, Northern Thailand grow the King's *Cymbidium* orchids.

Here in a magnificent panorama was seen a whole hillside of *Cymbidium* orchids in full flower looking, from a distance, so much like a field of wildflowers, it was hard to believe this was South East Asia in January and not the Australian bush or South African veld, in September. In colours of pink, green, yellow and pure white, the flowers contrasted sharply with the eternal green of the surrounding grasslands and the tall mountainsides covered with impenetrable forests of large leafed teak trees.

But Thailand, South East Asia it was, for whilst entranced with this magnificent scene I was talking with the King of Thailand, His Majesty King Phumipol Adulyadej.

My wife, Jean, and I had flown from Bangkok where we were attending the 9th World Orchid Conference, to Chiang Mai as guests of Dr. Som Isarabhakdi. Dr. Som, who gained a Masters Degree at the Brisbane University and is a well known Dentist in Bangkok, has established at Chiang Mai, the first commercial venture into *Cymbidium* orchids in Thailand.

At Chiang Mai, with Syd Monkhouse of Adelaide and Geoff Barry of Newcastle, I was introduced to His Highness Prince Bhisadej, who had come to our hotel to meet us. The Prince spoke of the king's desire to introduce new plants to the Thai mountain people to replace their dependence on the sole cash crop of the area, the opium poppy. The Prince invited us to be taken into the mountains the following day (Sunday) to see the *Cymbidium* orchids at the Mae Sa Mai Royal Irrigation Project.

Following our talk on Sunday to a group of people who are interested in growing *Cymbidiums* at Chiang Mai, Dr. Som and I set out for the mountains — unfortunately Syd and Geoff, through having to return to Bangkok that same afternoon could not go with us.

With Dr. Som driving, we travelled along a modern highway past the King's winter palace in the mountains and on to the Mae Sa Mai village and school. Here we were met by Prince Bhisadej and watched the ceremonies of the King receiving a gift from the

Mae Sa Mai people and giving gifts to all in return.

Lunch was offered and accepted. It consisted of sticky rice which one rolled into balls and flavoured with, oh so very hot, chili sauce which we ate with pieces of chicken, pork, dried meat and sweet potatoes. Each item wrapped in banana leaf and all beautifully presented in perfectly white, rice paper.

Having to wait a couple of hours for the transport arranged for us we were invited to wait in one of the villager's homes. Again, lunch was offered and again, accepted. This time it was help oneself to the communal pan on the completely open fire in the centre of the house which had evidently been burning for over 50 years. The fare looked beautiful — green vegetables, pork, chicken, big beans, etc. etc., and of course more chilies. It tasted even better than it looked and much time and pleasure was spent licking ones fingers, not having noticed any plates or cutlery. However, I kept to my own brand of tobacco, refusing both the 4 foot long ornate silver pipes and even longer, 3 inch diameter bamboo jobs filled with water.

From Mae Sa Mai we were driven in an air conditioned, 4 wheel drive Land Rover further on into the mountains. No conventional car could have made the journey so steep were the inclines of the road through the mountains.

The one-way road which was cut into almost sheer mountainsides twisted and turned to maintain just possible vehicle gradients and to avoid the largest trees. On one side of the track the cutaway of the hill was higher than the road was wide; on the other side was a sheer drop into gullies shrouded in mist so that the bottom of the ravines, many hundreds of feet below, were not even visible.

Our arrival was timed to again coincide with the King's visit, this time to the Royal Irrigation Project. The King, accompanied by Their Royal Highnesses Princes Maha Chakri Sirindhorn and Princess Chulabhorn, was visiting these places as part of his busy programme in the Northern areas of Thailand.

Cymbidium orchids are one of a variety of plants being tested at the Mae Sa Mai Royal Irrigation Project for introduction to the "Golden Triangle", that part of Northern

Thailand farmed for its opium production from the poppies that thrive under Cultivation in the high mountains. Other crops being tested include barley, potatoes, peaches and grapes.

The King has taken a personal interest in the project which, under the Directorship of Prince Bhisadej, is being sponsored by the United Nations Programme for Drug Abuse Control (UNPDAC). Dr. Pisit Voraurai of the Faculty of Agriculture, Chiang Mai University, has charge of the Cymbidium project.

Australia is assisting by contributing machinery and advisory personnel and has recently signed a further aid agreement with the Thai Government.

The unique culture of the Mae Sa Mai Cymbidiums was a big surprise, for nowhere else in the world have I seen these plants successfully cultured in ground beds. The ground had been scooped out to about 30 cm. deep and the hole filled with detritus and humus from the forests. In this the plants were thriving and flowering in profusion.

The high mountainous area of Northern Thailand is the home of three of the four Cymbidium species which have contributed so much influence to the modern day hybrids. These species: *C. insigne*, *C. tracyanum* and *C. lowianum* were seen in great clusters on the trees in the almost untracked jungle. It was therefore not surprising to find the modern day hybrids which are so pampered in our climate, thriving there in full exposure to Nature's elements of sun, wind and rain.

Just as the Thai people of Bangkok have succeeded with the tropical orchids, Vandas and Dendrobiums, (exports from Bangkok reached \$10m in 1977) so Cymbidium orchid growing both for cut flower production and plant sales of new strains of hybrids, could become of great economic importance in the temperate climate of the highlands of Thailand.

Australian Cymbidium growers, as exporters of flowers and plants to very many countries are in a strong position to assist this worthy project — the introduction of alternate cash crops to replace the opium poppy.

An offer has been made by Syd Monkhouse, President of the Australian Orchid Council to train, in Australia, a Thai horticulturist in all aspects of the Cymbidium industry. Other offers of assistance are sure to follow as the aid plan develops.

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ORCHID MISCELLANY

S. J. WALDIE

The first book on the cultivation of orchids was written by J. C. Lyons of Ladiston, Ireland. He called it "Remarks on the Management of Orchidaceous Plants, with a Catalogue of those in the collection of J. C. Lyons, Ladiston. Alphabetically arranged, with their native countries, and a short account of the mode of cultivation adopted, 1843".

As well as writing the book of 96 pages, he set up a press in his home, made his own woodcuts, and did the printing and binding. There are now only about three copies of the book still in existence.

Lyons tried to find out as much as he could about the habit of growth and the kind of climate they were used to in their native habitat. He also made note of the dormant period saying that the orchids "enjoy light, a free air, and are subjected annually for three or four months to a low temperature and a great drought, and it is worthy of remark that the time of drought and the decrease of temperature occur together. This may be considered their season of rest".

Among the plants in his collection were *Cyp. insigne* (syn. *Paph. insigne*) and *P. venustum*, about ten each of the genera *Cattleya* and *Dendrobium*, *Odont. grande*, 24 of the genus *Oncidium*, one *Vanda* and one *Schomburgkia*.

TIMELY WARNING ON SPRAYS

Mr. John Fanning, President of the A.N.O.S. Victorian Group, writing in the Group Bulletin, points out:

Highly toxic systemic pesticides and fungicides have been "off the shelf" for so long that it is very easy to fall into the trap of neglecting the dangers and treating them as though they were Rinso. The penalties for adopting this attitude are invariably played down and safety instructions are written in very tiny letters on the label.

This note was prompted by a couple of incidents involving Benlate — one of our favourite fungicides. It is certainly not Rinso and the safety instructions should be followed closely. The writer was very thoroughly ticked off by an agricultural scientist for not wearing gloves when mixing and he was warned to be very careful when spraying that its contact with bare skin is minimal and all bare skin is washed as soon as spraying is completed.

Being careless costs no effort at all. The after-effects may be a different story. Do YOUR methods stand close scrutiny?

"REVELATIONS"

MERVIN E. DUNN

Each time I read another commentary on the genealogy of *Cymbidiums* I am reminded of the Book of Genesis; only the names have been changed — but not very much changed . . . "and Alexanderi begat Rosanna the son of Kittiwake . . ." followed by a resume of the battles of Rosanna's favourite, "Pinkie", to win the favours of the most venerable of all orchid judges and of Pinkie's sojourn among the "savages" of foreign lands of the then known (*Cymbidium*) world. It continues "and Rosanna begat Nam Khan, the son of Pauwelsii . . ."

So, well reminded as I am of the good book but, by way of a change from history lessons, here is an interpretation of the Book of "Revelations", *Cymbidium* Revelations, that is; which although not yet written, could quite conceivably commence; "It shall come to pass in the last quarter century of the second millenium that the members of the tribe *Cymbidium* shall be doubled and, yeah, even quadrupled, in stature. This work, having commenced as a small spark two decades before, will shortly be taken up by a great number of disciples in many lands until the great fire so kindled will have all but consumed the diploid and triploid *Cymbidiums* and left in their place new generations of tetraploids and hexaploids, even unto octoploids. Verily I say unto you; the most profound improvement ever in *Cymbidium* orchids is nigh at hand".

In reality what is happening and what will continue to happen is that the vast improvements now being achieved in *Cymbidium* blooms by doubling the ploidy of the plants is causing and will continue to cause big changes in the whole ambit of the *Cymbidium* world. Changes will occur in the fields of commerce, in show bench judging standards, in hybridising and in the growing of *Cymbidiums*-for-pleasure field. But before expanding on the actual changes which will occur, it is perhaps timely, now at the end of the first year of the period referred to above, to list again the improvements in the blooms of those plants, the ploidy of which has been doubled.

Of paramount importance among these

The Colchicine Problem

When a diploid variety such as *Cymbidium* Sensation 'Melita' is converted by colchicine to a tetraploid it differs considerably from the original clone. How should such an altered clone be distinguished? An easy way of designating such man-made polyploids is vital if confusion is to be eliminated.

A.O.C. President, Mr. Syd Monkhouse, was early to see this problem. See his article on the subject in "A.O.R.", March, 1977, page 16. His suggestion was to add the letters C.T. for Colchicine (or chemically) Treated after the diploid name. This suggestion received the support of the Australian Orchid Council at the 1976 Annual General Meeting. However, overseas growers do not think this is adequate.

Dr. D. E. Wimber, of the Biology Department, University of Oregon, who has probably done more work in this field than anyone else suggests that the prefix *neo* be added to the original clonal name to indicate it was derived from another clone and now has a modified chromosome number.

He further says, quite rightly, that an award given to the original clone cannot be used by the converted clone since it is a different form. He makes other suggestions too but the *neo* prefix is the one he favours.

Have you an idea which might be acceptable to the rest of the world? A flash of inspiration led Mr. Gordon Dillon to suggest the name *mericlone* for meristem cultured plants. Why not *neoclone* for artificially created polyploids? This would link up with Dr. Wimber's prefix.

Have you a better idea? Tell "A.O.R." — and the world — about it — Editor.

improvements is the increase in the longevity of the life of the blooms both on and off the plants. Whilst no comprehensive set of statistics is available, the exploits of a few of the converted-to-tetraploid flowers serve to illustrate by just how much the keeping qualities of the blooms have been improved.

During June, at our Reynella *Cymbidium* farm, 55 plants of Lunagrad 'Elanora' (4n) came into flower for the first time as did 52 plants of Lunagrad 'Elanora' (2n). One plant of the tetraploid form was shown at the OCSA Winter Show, July 1. It gained the prize for "Best *Cymbidium*". On July 13, one spike of 13 flowers, again of the tetraploid form, was taken to Sydney and gained an Export Award by the New South Wales

Orchid Society. In late August, one spike was sent to Philadelphia, U.S.A. and on September 1 this spike of Lunagrad 'Elanora' (4n) was granted an HCC/AOS, with 78 points. Later in September, we took with us to the 3rd South African Orchid Conference Show, Cape Town, South Africa (a distance of some 10,000 miles) eight spikes of Lunagrad 'Elanora' (4n) HCC/AOS, EA/NSW. These flowers lasted throughout the eight-day show at Cape Town and were then transported a further 1,000 miles, without water, to Pretoria. There they were still in a presentable condition on being given away once again, this time by our hostess, when we left Pretoria at the end of September for a week at Kruger National Park. Other converted-to-tetraploid flowers taken to Cape Town, including: Zumma Boyd 'Yowie Bay' (4n) which was in full flower in June; Sleeping Beauty 'Colossus' (4n); Sleeping Dream 'Tetra Daffodil' (4n); Sleeping Beauty 'Sweet Dream' (4n); all behaved with similar distinctions. Two other spikes of converted tetraploids sent to Philadelphia with Lunagrad 'Elanora' (4n) HCC/AOS EA/NSW gained awards on September 1, namely; Zumma Boyd 'Tetra High' (4n) AM/AOS, (82 points); and Sleeping Lamb 'Golden Tetra' (4n) HCC/AOS (79.3 points).

The intensity of colour in all parts of the flowers of converted-to-tetraploid plants is markedly improved. The thicker tissue of these flowers reflects more light, hence more colour — more depth of colour, making for more striking flowers. Lip markings in the tetraploids are at times at variance to the diploid lip markings but in no case have I seen the markings of the tetraploid lips to be inferior to the diploids.

The substance of the tetraploid flowers is considerably improved. The double volume of the cells of the converted flowers gives double volume to the tetraploid flowers compared to the diploid flowers. Of the three dimensions of the flowers — width, height and thickness of tissue — the thickness of tissue is the one dimension increased proportionately more than the other two dimensions. Whilst the actual volume of the flowers is hard to measure accurately, it does appear that the 4n flowers are twice the volume of the 2n flowers. Try it by immersing a diploid flower in a container of water and measuring the increase in the level of the water followed by immersing a tetraploid flower of the same

name and from similar culture. The 4n raises the water level twice the distance of the 2n.

The shape of the tetraploids are closer to show-bench standards of excellence. To accommodate the larger cells (larger to accommodate the extra sets of chromosomes) all parts of the flower are wider than the diploid's corresponding parts — the petals, the sepals, and even the labellum and the column. Whilst the column may not play a big part in determining the nearness to perfection of the shape of the whole flower, the wider lip generally does enhance the overall appearance of the flower. The tepals are more rounded at the distal ends. Indeed, the flower appears as if air has been forced through the flower stem into all parts of the flower giving it a "full" appearance.

The flower spike is more robust: often it is of sufficient strength to avoid the necessity of a supporting stake. Even the texture of the flowers is improved by the thicker substance reflecting more light.

Tetraploid flowers withstand handling and packing better than diploid flowers; they travel better and will travel further whilst still remaining in fresh condition.

The real advantages of the converted-to-tetraploid flowers will be quickly noted by all branches of the Cymbidium cut flower trade. Growers will find it more economic to produce their crops of flowers at places away from the populous cities where the big markets exist. They will move away from the cities of higher latitudes to places where the climate is more suitable to the culture of Cymbidium orchids. The fact that the new tetraploids can be packed without padding material and transported long distances without water supplies, together with the lower costs of production, will more than offset the transport costs to the market places. More and more existing big growers will re-establish their farms at sea level on the 35th parallel of latitude or at such lower latitudes where higher altitude offsets the higher winter temperatures of the lower latitudes. New growers will tend to establish at these same places.

Brokers and wholesalers will demand nothing less than tetraploid flowers or will establish differential prices for flowers according to their (the flowers) ploidy. The longer-lasting flowers will allow these merchants to order and buy in larger quantities and store

the flowers for longer periods awaiting times of expected higher than normal demand. Bigger orders and bigger shipments with consequent freight and handling savings will see a trend towards fewer but bigger growers and fewer and bigger brokers and wholesalers with flowers passing through more hands before reaching the consumer.

Florists will welcome the longer-lasting blooms. They will be willing to maintain larger stocks, make more effective displays and they will consequently sell more *Cymbidium* flowers. Their losses will decrease allowing them to pay more per flower.

The consumer, whether buying a corsage, a sheath of flowers or simply a few spikes for vase decoration, will be pleasantly surprised at the brighter colours, the more shapely flowers, the stronger spikes and above all, by the long, long life of the blooms.

Already we have seen in print what the orchid judges of the Royal Horticultural Society said about converted-to-tetraploid *Cymbidium* flowers. "The Orchid Review" June, 1976 at page 152:—

"*Cymbidium* Cariga 'Tetra Canary' (Carlos x Riga). This cultivar, derived by (colchicine treated) meristem propagation from the cultivar *Cym.* Cariga 'Canary' AM/RHS is entitled to this distinctive cultivar epithet if and when three consecutive bloomings prove it consistently distinct from the parent cultivar. The Committee felt unable to judge it as a distinct cultivar until such consistent distinctness had been proved to them by their seeing three consecutive bloomings."

The possibility that a tetraploid can revert back to a diploid is just, not on! This catastrophe is no more likely than ducks will produce pigs. Once the plant is a tetraploid, the only way it can go is to a higher ploidy — octoploid or above.

In Australia at the present time, each State orchid club holds its main show in the Spring. These shows are predominantly of *Cymbidium* orchids and unfortunately the shows clash in time one with the other. In future, plants with similarly high quality flowers will be in show condition throughout the whole flowering season, allowing shows to be held over a longer period. A circuit can be established and followed by those wishing to exhibit and by those wishing to view the flowers, in each capital city, in turn. Such a sequence of shows could help the Australian practice of granting awards to orchids to come to par

with world standards, a very desirable point which will assist the Australian hybridists who presently find it expedient to send their flowers overseas for recognition.

The availability of high quality, intense coloured tetraploids which will flower from "ultra early" to "late" in the flowering season will see the end of sterile triploid breeding. More accurate predictions of the seedlings' colour and flowering times will be possible as both parents will contribute the same number of chromosomes to their progeny. Hybridising will be concentrated into fewer hands. Those hybridists having complete banks of stud plants to produce the colours required throughout the whole season and who are prepared to show the quality of their stock in colour catalogues, will dominate the plant sales markets. Initially, many mericlones will be made of the new tetraploids to satisfy the demand of hybridists for improved stud plants. Later, because of the higher quality expected, seedlings will form a bigger percentage of the world's total *Cymbidium* plant production with seedlings bred from colourful tetraploids predominating. It is readily agreed there have been some good *Cymbidium* parents in the past. To be classified a "good parent" surely such plants produced offspring better than themselves. Just as surely, these newer, better plants will prove to be better parents. Accordingly, hybridists will tend to use more of the new improved orchids as parents rather than the continued use of older orchids. Improvements in *Cymbidiums* will accordingly be accelerated.

Of importance in showing orchids is the point that the flowers be at their peak of quality at show time. The new tetraploids, by remaining fresh for a longer period, will cause demand to increase for earlier flowering plants with show-winning potential. The longer life of flowers will increase even further the popularity of *Cymbidium* orchids as "pot plants".

In summary, the conversion of *Cymbidium* plants to higher ploidy will benefit everyone interested in these fine orchids. The sooner these improved plants replace the lower ploidy plants, the sooner everyone will enjoy the benefits of these better plants. With more confidence, we will be able to say; "*Cymbidiums* outlast all other flowers", "they are a more economic purchase than any other flower", "they are the best that can be produced", "they will serve you well". Amen!

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Cattleyas are Colourful

RONALD KERR

Glamorous orchids. Exciting forms. Scintillating colours. Outside cymbidium-ridden areas the genus *Cattleya* has caught public imagination more than any other.

It is dramatic in size, shape and sheer femininity. Even a comparatively poor form will have more admirers than detractors. Not all species have large flowers but smallness is generally offset by floriferousness.

The flowers last around three weeks at their peak. They are perfect for decorative work and make excellent corsages.

A major asset is that with a collection consisting of cattleyas alone it is possible to have some out at any time of the year. This is because some species are autumn-flowering and others flower in Spring. Hybrids between the two may flower at intermediate times. If the beginner is surprised then he will be interested to know that pollen can be preserved for six months by refrigeration.

Cattleyas are grown in every Australian State. Coastal Queensland and northern New South Wales are the fortunate areas. There a glasshouse is not necessary but is nevertheless desirable because it ensures greater control of growing conditions.

In other areas a glasshouse is essential for all except a few species. In colder areas winter heat is necessary to the extent of a minimum 13 deg. C for Spring flowerers.

The autumn-flowering types make growth during the warmer months and thus can be grown in most areas without heat. They are dormant in winter and water can be almost entirely withheld as long as humidity is high and gentle air movement exists.

The autumn species usually have two leaves to a stem and are known as bifoliate cattleyas. Flowers are smaller, but some such as *Cattleya bowringiana*, may have as many as 14 or 15 flowers to a peduncle.

Spring-flowering species have the dramatically large flowers but usually only one or two on a stem. However, extensive hybridising has resulted in many intermediate forms in shape, size, colour and flowering times.

Although mainly warm growers temperatures in excess of 30 deg. C are undesirable because plant metabolism virtually stops

around this temperature. Although about 50 per cent shade is optimum this should be increased where very hot weather is likely. Artificially-induced extra humidity is also necessary to offset high temperature. This may consist of damping down the growing house floor, using fans to draw out hot air, or such a sophisticated device as a thermostat-operated evaporative cooler.

All cattleyas grow well in pots and whether they are plastic or terra cotta is a matter of personal choice. However, because they like to dry out between waterings most growers prefer to use terra cotta. The main thing is to have all one type and not a mixture. Anyone using all plastic pots will have to water less.

The pot should be as small as will allow for two or three years' growth because it takes about two years for a division to build up to flowering size.

Thus a long-lasting and good-draining compost is essential. Currently favoured is a mixture of medium-size pine bark 50 per cent, charcoal 30 per cent and styrene foam 20 per cent. However, individual growers must experiment by using whatever is easily obtainable in their district.

Because the compost is relatively inert feeding *during active growth* is essential. Established growers have their own "brews" but a beginner is safe with very weak organic fertilizers such as Fish Emulsion or "Nitrosol" fortnightly, alternated in the off weeks with an inorganic such as "Aquasol" or "Gar-N-Gold".

Feeding should be done after watering and on a rising temperature. The watering washes out old salts and the plant's metabolism is most active on a rising temperature.

Pests are relatively few but Red Spider Mite can be a menace. The Mite likes glasshouse conditions so preventative spraying is advisable. About twice a year may be enough but it should be a double attack using two sprayings a week apart on each occasion. Choose a time when nothing or little is in bloom.

Sprays are dangerous to handle and if you are inexperienced seek advice from a nurseryman. Reasonably safe sprays are

"Malathion" and "Buggeta" but even with these rubber gloves, a dust coat that can be washed, and a cloth face mask that can be discarded, are advisable. With more lethal sprays more elaborate protection is necessary. Eyes should be protected with goggles or full face mask whatever the spray being used.

HYBRIDS

Cattleyas have been hybridised over a very long period. The Veitch nursery had recorded the first ever orchid hybrid in 1856, and they followed this in 1959 with the first cattleya cross.

This was *C. Dominiana*, the parents being *C. intermedia* and *C. maxima*. In 1863 Veitch and Company capped this by winning the first ever Award — a Silver Banksian Medal — from the Royal Horticultural Society with *C. Brabantiae* (*C. aelandiae* x *C. loddigesii*). Since then the genus has been hybridised within its own species and with just about every genus of the Subtribe *Laeliinae*. This subtribe was called *Laeliinae* by the botanist Schlechter but some horticulturists refer to it as the *Cattleya* tribe. It includes the genera *Laelia*, *Brassovola*, *Epidendrum*, *Broughtonia*, *Diacrium*, *Schomburgkia*, *Sophronitis* and *Leptotes*, and a few minor ones of little or no horticultural importance.

The amount of breeding within what is loosely called the Cattleya Alliance far exceeds that of any other genus or group.

A *Cattleya* crossed with a *Brassovola* is known as a *Brassocattleya*. This man-made genus dates back to 1889 when the cross *B. digbyana* x *C. mossiae* was registered as *Bc. Digbyano-mossiae*. *Brassocattleya* is one word and should always be abbreviated as one word: *Bc.* not *B.C.* as is so often done.

The *Brassovola* species, particularly *B. digbyana* have imparted wide labellums with marked fringing to their progeny. Even after several generations of hybridising within the alliance the *Brassovola* influence can be recognised.

Incidentally *B. digbyana* and *B. glauca* were made synonyms when Schlechter created the genus *Rhyncholaelia* but for registration purposes the old genus name has been retained.

Use of the genus *Laelia* created the new genus *Laeliocattleya* (abbreviated *Bc.*; and also the genus *Brassolaeliocattleya*, abbreviated *Blc.*).

Sophronitis is a genus which has contributed a great deal to the Alliance, particularly in reds, but also in roundness of shape and compactness of foliage. The species most often used is *S. coccinea* (syn. *S. grandiflora*) a fistful-sized plant whose 5 cm flowers cover the leaves in bright red or red-orange splendour.

It has been used with *Cattleya* to make *Sophrocattleya*; with *Laelia* to make *Sophrolaelia*; and *Laeliocattleya* to make *Sophrolaeliocattleya*. Abbreviation for the latter is *Slc.*

Name compounding for these new genera can get out of hand, so botanists have adopted the practise of naming complicated intergenerics after a prominent orchidist and adding the surfix *ara*. Thus a *Sophronitis* species crossed with a *Blc.* is known as *Potinara*.

Many such made names exist within the Alliance and it is part of the fun of growing orchids to learn them. The best way is to buy a plant or two of such unusual intergenerics as catch your eye at a nursery. It is a thrill to watch them grow and anticipate how they will turn out.

An influential parent for colour is *Slc.* Anzac which is a compound of the species *C. dowiana* (twice), *C. mossiae*, *Laelia purpurata*, *L. cinnabarina* and *Sophronitis coccinea* var. *grandiflora*.

The colour illustrations in this issue show the labiate type orchids which have been winning at recent shows. These demonstrate the fine shape and beautiful colour range achieved by hybridising.

Note that several generations of breeding for shape have produced flowers of similar symmetry. On appearance alone it would be difficult to tell intergenerics from straight cattleyas. The six illustrations include one *Cattleya*, three clones of *Brassolaeliocattleya*, and one each of *Laeliocattleya* and *Brassocattleya*. They are all judged to the one standard.

To achieve this high aesthetic standard in labiate (single leaf) hybrids the most influential parents have been *C. dowiana* and its variety *aurea*, and the natural hybrid between *C. dowiana* and *C. warsewiczii* named *C. hardyana*. *C. mossiae* and *C. trianae* are also prominent in pedigrees.

The familiar cattleya purple has come mainly from *C. mossiae* and *C. labiata*.

White cattleyas were produced by line

The Sheer Magic of Colour and Shape

Laeliocattleya Culminant 'La Tuilerie' HCC

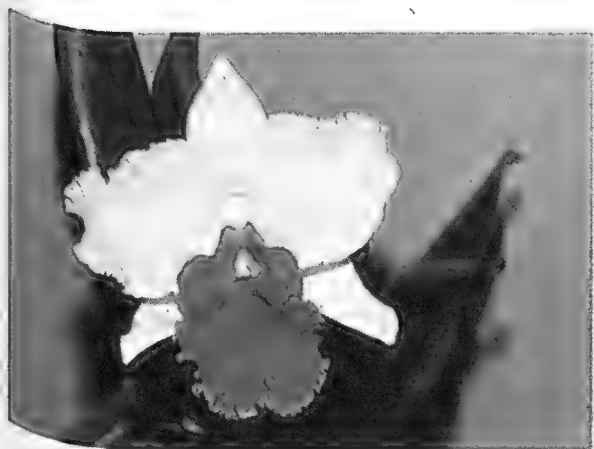
A beautiful pink which has been a consistent show winner over the past few years.

It does not appear to have been registered with the R.H.S. but is mentioned in a 1960 catalogue of the hybridisers, Vacherot & Lecoufle of La Tuilerie, France. The parentage was given as *Lc. de France* x *C. Gaillard*, also not mentioned in Sanders, although there is a *C. Le France*.

Vacherot & Lecoufle were the first nursery to undertake large scale meristemming and this fine clone is widely distributed as a result.

It could be handy to know the genetic influences in its ancestry, but even if it is illegitimate, with a figure and personality like this who cares.

See also page 32.



Brassolaeliocattleya Ewart McDonald

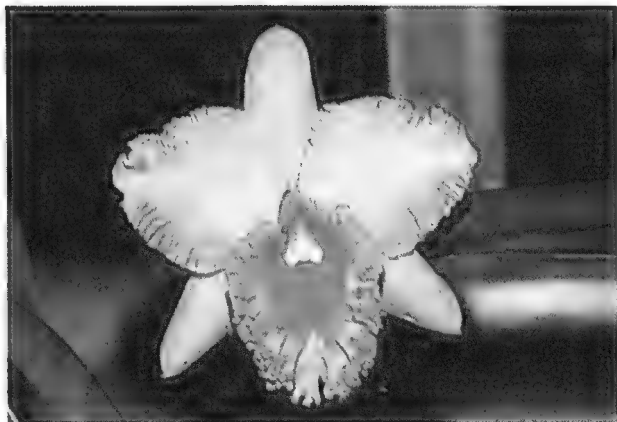
Sheer colour contrast makes this a truly dramatic orchid. It is a cross between *Blc. Normans Bay*, a very famous parent grex which has been used in nearly 150 registered crosses, and *Lc. Vallandina*.

Both parents have complex lineages. The influence of the natural hybrid *C. hardyana* is strong on both sides. *C. hardyana* comes from the species *C. dowiana* x *C. warscewiczii* and the three appear several times in both lines. The *Brassovola digbyana* influence is there too, as a great grandparent.

Brassocattleya Harlequin 'Act I'

This cross was registered in 1939 by the Kruff nursery of Germany. The lip shape shows the strong influence of *Brassovola digbyana*, a grandparent. The parents are *Bc. Heatonensis* and *C. Prince John*, with the *C. dowiana* and *C. warscewiczii* influence strong on both sides.

With a shape and colour like this *Bc. Harlequin 'Act I'* is still capable of winning its class. The good cattleyas of 40 years or so ago don't date. Can this be said for cymbidiums!



Photos: A. B. Porter

ADVANCED C

READY FOR IMMEDIATE

Community pots (5 pint) contain 10 superbly grown Cymbidium plants which have leaves, alive right to their very tips. Leaf length is over 15 cm and each plant has

YELLOW SEEDLINGS

- 7505+C MELINGA 'RUM JUNGLE' x PHARAOH 'GREEN CASCADE'. The first is the colour of uranium, ultra early. Crossed here with a multi-flowered green pure-colour. 100% P.C. Colchicine treated \$50
- 7507+C WYANGA 'SUPREME' x SLEEPING LAMB 'GOLDEN FLEECE'. Expect very early yellows and greens. All will at least carry P.C. factor. Colchicine treated \$40
- 7527+C SIRIUS 'GOLDEN DAWN' x SUSSEX DAWN 'DOROTHY MAY'. The quality parents of both the Melingas and the Sleeping Beautys combined. Expect the best in very early greens and yellows. 25% P.C. Colchicine treated \$40
- 7539 WALLARA 'GOLD NUGGET' (4N) AM/AOC x BALKIS 'CAPT. ANDERSON' AM/NSW. Tetraploid yellows. The parents' awards speak for the quality expected. 100% 4N \$40
- 7540 DORAMA 'FAIRFIELD' HCC/NSW x WALLARA 'GOLD NUGGET' (4N) AM/AOC. Expect outstanding show bench yellows. 100% 4N \$40
- 7404+C SLEEPING DREAM 'GOLD RUSH', AD/SA x SLEEPING BEAUTY 'BUTTERCUP'. Two intense yellows. The Sleeping Beauty is from S.B. 'Sarah Jean' x S.B. 'Giant'. Expect beautiful, intense yellows for show times — some earlier. 100% P.C. Colchicine treated \$50
- 7406 PHARAOH 'KING OF KINGS' x SLEEPING BEAUTY 'BUTTERCUP'. Expect quality yellows-whites — some early. 100% P.C. \$40
- 7408+C SLEEPING DREAM 'GOLD RUSH' AD/SA x SLEEPING QUEEN 'REYNELLA' (4N). 'Gold Rush' is our brightest yellow-orange pure-colour — the cross is made to produce intense yellows with pretty pink lips. Triploids. Colchicine treated \$40
- 7409 CORAKI x CLEO'S MELODY 'CANARY' SM/5th AOC. Here's colour — expect brilliant yellow triploids with good spike habit. Cleo's Melody has all the shape needed to enhance the fine Coraki \$40
- 7410 DORAMA 'FAIRFIELD' HCC/NSW x WALLARA 'GOLDEN GLOW' (4N). Shapely, bright yellows in August-September. 100% 4N \$40

PINK SEEDLINGS

- 7525+C KIATA 'NIGHTSHADE' x LUNAGRAD 'ELANORA'. Lunagrad 'Elanora' is proving to be an outstanding parent for all colours. Expect pinks to dark pinks. Colchicine treated \$40
- 7417 DURHAM CASTLE 'MEM. W. W. KAVANAGH' x SYLVANIA 'PINK CASCADE'. Two brightly coloured pinks — prize winners in 1st week of May and 1st week of July respectively. Expect very early pinks of quality. Triploids \$40
- 7418 VALLEY FLOWER 'CHERRY RIPE' x SYLVANIA 'PINK CASCADE'. Tetraploid pinks — some early. Important cross for early studs. 100% 4N \$40
- 7425 PALAKER 'CORONET PEAK' x SYLVANIA 'PINK CASCADE'. An early white tetraploid with an ultra-early pink tetraploid. Expect ultra-early pinks — some whites. 100% 4N \$40
- 7426 VALLEY FLOWER 'CHERRY RIPE' x ROSE VALLEY 'JEAN'. The Rose Valley is a deep pink carrying Rosanna Pinkie's shape and Nam Khan's deep colouring. Expect show and award quality pinks in late September. 100% 4N \$40

WHITE SEEDLINGS

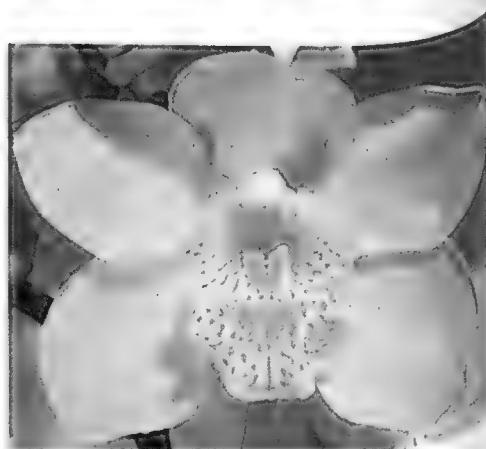
- 7413 PEARL BALKIS 'VALLEY HIGH' AM/NSW x BALKIS 'CAPT. ANDERSON' AM/NSW. We rate Pearl Balkis clones today's best show bench studs. The cross is most important to continue the "AWB" line. 100% 4N \$40
- 7414 BALKIS 'CAPT. ANDERSON' AM/NSW x VALLEY HEIGHTS 'DECEMBER'. Late whites. The ones that make show time will acquit themselves well. 100% 4N \$40
- 7427 PEARL BALKIS 'VALLEY HIGH' AM/NSW x MARY ANN 'MANLY VALE'. The best of the white Pearl Balkis with the whitest of the Mary Anns. Expect quality late to very late, white tetraploids. 100% 4N \$40



SLEEPING DREAM 'TETRAGOLD' AM/RHS, AM/AOC



VALLEY FLOWER 'CHERRY RIPE'



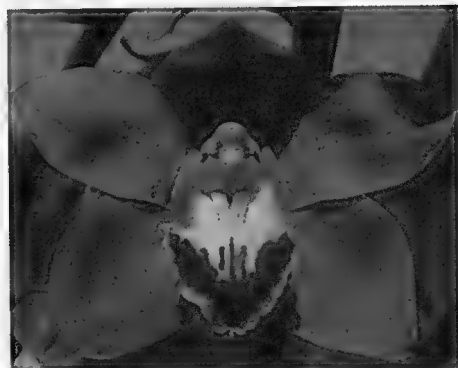
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at least six months in our shade houses. Each plant has a full complement of pot system. They are sent bare root, freight free.

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V313	LUNAGRAD 'ELANORA' (4N) HCC/AOS, EA/NSW x VALLEY PEARL 'REYNELLA'. Expect highest quality show and stud plants. June-October, in pinks, greens, yellows. 100% 4N	\$40
V315	ZUMMA BOYD 'TETRA HIGH' (4N) AM/AOS x WYANGA 'ELANORA' AD/NSW. Made for early polyploid greens for long-lasting commercial flowers. Triploids.	\$40
V324+C	GREENSTONE (WYANGA 'ELANORA' AD/NSW x SUSSEX DAWN 'DOROTHY MAY'). Remake of an outstanding cross of which so few clones exist. Expect quality greens throughout the season. 50% P.C. Colchicine treated	\$50
V411	PHARAOH 'KING OF KINGS' x SLEEPING QUEEN 'REYNELLA' (4N). Made for clear colours with pretty lips. Triploids	\$40
V421+C	SLEEPING GIANT 'PACIFIC' x WYANGA 'ELANORA' AD/NSW. The deep green Wyanga crossed with the prolific, soft green Sleeping Giant will produce bountiful plants carrying upright spikes in all shades of green flowers for July, August and September. 100 % P.C. Colchicine treated	\$50



ZUMMA BOYD 'TETRAHIGH' AM/AOS

MERICLONES

V307	VALLEY FLOWER 'CHERRY RIPE'. Won seedling prize 3rd Australian Orchid Conference, 1973. Won 'Best Pink' 1974. Rates the best pink tetraploid we have ever seen. Flowers Sept. Heavy producer	\$60
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V303	SLEEPING DREAM 'KINGS RANSOM'. Outstanding by every test of a good orchid. Possibly the best diploid pure colour show and stud plant available. A superb orchid, flowers August	\$60
V306	PHARAOH 'ALMIGHTY' (4N). The Big Prize Winner of the 3rd Australian Orchid Conference Show when it had four spikes, 16, 13, 12 flowers, from two bulbs. Superb, August flowering white Tetraploid. Pure colour	\$60
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V305	SLEEPING DREAM 'TETRAGOLD' (4N) AM/RHS/AOS. The first known tetraploid pure-colour. Gained its Award of Merit in 1974 and was runner-up for the "1974 Westonbirt Memorial Medal". Up to 18 flowers to the spike. Now has U.S. Award	\$80
V304	VALLEY GEM 'PICCADILLY'. Perfectly upright spikes carrying many, large, long-lasting, yellow flowers of excellent shape. One of our tetraploid studs. Flowers in August	\$50
V604	LUNAGRAD 'ELANORA' (4N) EA/NSW, HCC/AOS. Deep green. Awarded Sydney, July 13th, 1976 and Philadelphia, Sept. 1st, 1976, 78 points when the flowers had been fully open 10 weeks. Up to 13 flowers (15 cm) in mid-June on semi-arching spikes	\$60
V509	ZUMMA BOYD 'TETRAHIGH' (4N) AM/AOS. Outstanding September green with upright spikes. Gained its Award on Sept. 1st, 1976, 82 points, 12 x 11.5 cm flowers	\$60
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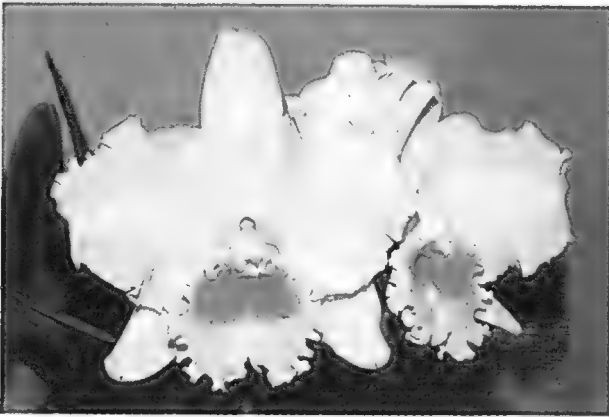
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SEND FOR FREE COLOUR CATALOGUE

Recent Award and Show Winning Cattleyas



Cattleya Bob Betts 'Sestiva' HCC

A fine clone of this grex, but there are others as good. Clones of the cross have been used as a parent on nearly 200 occasions to date. The cross is from *C. Bow Bells*, also a notable parent, and the species *C. mossiae* registered by the McDade nursery in 1950.

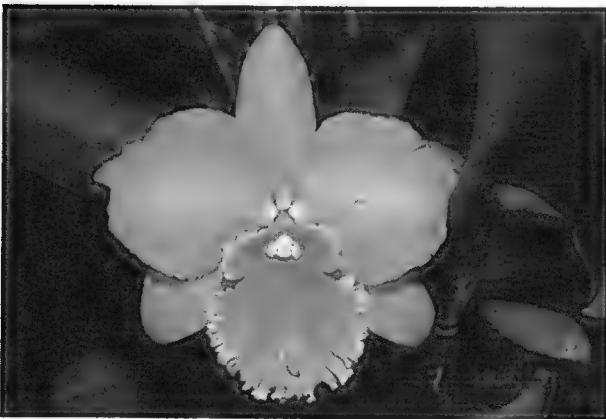
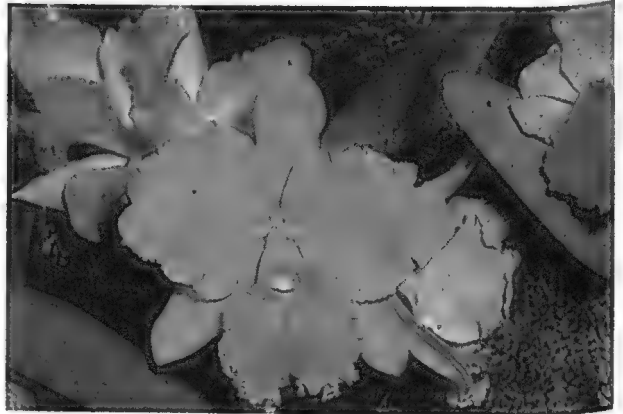
It is fifth generation and the *C. mossiae* influence is very strong, being either 50% or 25% in each generation.

Brassolaeliocattleya Moonlight Park

C. Bob Betts has been used as one parent and *Blc. Daffora* as the other. The *Daffora* colour dominates but the *Bob Betts* shape comes through.

Although registered as long ago as 1938 by Charlesworth & Co. *Blc. Daffora* is from a long line of complicated breeding going back to the crossing of *C. bicolor* and *C. dowiana* in 1901. The influence of these two species is strong in each successive generation.

Colour was introduced via *Laelia tenebrosa* and *Laelia xanthina*. The *Brassovola digbyana* influence can be noticed in the broad frilly lip.



Brassolaeliocattleya Malworth 'Orchidglade' AM

Regarded by many as the finest yellow yet bred. It has been freely available as a meristem and therefore is frequently seen at shows and orchid meetings. Major world societies have honoured it with awards. Parents are *Lc. Charlesworthii* and *Blc. Malvern* and the cross was registered in 1963 by Jones and Scully of Florida.

Lc. Charlesworthii is an old cross, dating back to 1900, between the species *C. dowiana* and *Laelia cinnabarina*.

Blc. Malvern has a more complicated pedigree, with several infusions of *C. dowiana*, and one, back in 1902, of the broad frilly lipped *B. digbyana*.

breeding of albino or anthocyanin free forms. With yellows the early hybrid with dominant influence was *C. Iris*, bred from *C. dowiana* 'Aurea' and *C. bicolor*.

Laelia tenebrosa increased the potential for yellow but where *C. bicolor*, a bifoliate, was also in the lineage a fault known as crippling dominated. This has largely been bred out in yellows by using *Brassovola digbyana*.

Good yellows have come from the introduction of *Laelia harpophylla* into breeding lines, and the use in recent years of *Laelia milleri* has helped to improve reds.

Of the bifoliate, or two-leaved section of the Alliance, the influential parents have been *C. loddigesii* and its variety *harrisoniana*, also the lovely cluster-flowered *C. bowringiana*.

Breeders now are striving for better whites, rose purples, pure reds and yellows, perfect greens and even a true blue cattleya.

Colour is a complex matter and a hybridiser does not automatically get all whites by breeding from two white clones. It is a whole subject in itself and beyond present scope which is to suggest the breeding lines to look for in selecting seedlings. Read also the data on each colour page.

Ploidy or chromosome count is also a factor and there is virtue in buying colchicine-treated seedlings or meristems when these become available as long as you recognise that not all will be converted to polyploids.

Currently mericlones as meritorious as those shown are available from leading nurseries and are well worth the small cost.

If you live in Queensland's or the northern New South Wales' coastal strip cattleyas may well be the genus with which you start your orchid career. It is an experienced grower's orchid for other areas.

CATTLEYA CULTURE IN NEWCASTLE

— Allan Deith in *Boolaroo O.S. Bulletin*

Potting medium. Equal parts of pine bark, peat moss, charcoal and styrene.

Water. The pot is flooded once per week in Summer. This ensures that the whole of the potting medium is wet, and also that excess fertilizer is removed from the compost. The latter prevents a build-up of toxic salts. Also a light overhead spray is given once or twice a week.

Feeding. The plants are fed infrequently, say one to three weeks, with a light dose of Aquasol. This is done all the year round.

General culture. Plants are grown in a glasshouse with heat in Winter. Shadecloth, 52 per cent, covers the glasshouse.

The Finest Cattleyas

As selected by A. J. Merriman in the *Blue Mountains O.S. Orchid News*.

I have been asked that if money was no object what cattleyas would I buy to make up a small collection of quality clones. This is indeed a hard question to answer because everyone has a different taste of likes and dislikes.

To me a cattleya collection should have a variety of colours and if possible flowers for every meeting night. I also like the small novelty crosses as well as the large exhibition flowers. Well, here goes. This is my list:—

1. *Blc. Sylvia Fry* 'Supreme' — mauve.
2. *C. Tiffin Bells* 'Orchidglade' — white.
3. *Blc. Malworth* 'Orchidglade' — yellow.
4. *Pot. Carrousal* 'Crimson Triumph' — burgundy red.
5. *C. Porcia* 'Canizarro' — purple.
6. *Slc. Jewel Box* 'Scheherazade' — red.
7. *Blc. Normans Bay* 'Lucille' — mauve.
8. *Pot. Gordon Sui* 'Red Radiance' — red.
9. *L. milleri* — red species.
10. *Lc. Variance Sunset* 'Pokai' — red.
11. *Bc. Mt. Anderson* 'Louve' — pink.
12. *Slc. Falcon* 'Alexanderii' red (virus free).
13. *Slc. Falcon* 'Westonbirt' — red.
14. *Blc. Fortune* 'Spellbound' — yellow.
15. *Blc. Normans Bay* 'Low' — purple.
16. *Lc. Eva Robinson* 'F.C.C.' — mauve purple.
17. *C. Dubiosa* 'Perfection' — white.
18. *Blc. Lorraine Malworth* 'Orlando' — yellow.
19. *C. bowringiana* — purple species.
20. *Lc. Hertha* 'Wondabah'.
21. *Lc. Culminant* 'La Tuilerie' — mauve.
22. *Bc. Mt. Hood* 'Joy'.
23. *Bc. Languedoc* 'Singapore Welcome' — pink.
24. *Blc. Ranger Six* 'A + OK' — white.
25. *C. Mary Ann Barnett* 'Luxembourg Waltz' — white.

. . . and so the list goes on! If only we had a little more . . . well, no use dreaming.

WATERING CATTLEYAS IN WINTER

— Bert Schwartz in *O.S. N.S.W. Orchid News*

As Winter approaches and when flowers have gone plants should be rested and watered sparingly. Of course other cattleyas will continue to flower right through the Winter and these must be watered regularly until flowering is finished.

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by

Lance A. Birk

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While written for the beginner, this colourful, easy-to-read, 48-page booklet will tell you everything you need to know to grow beautiful, healthy Cymbidiums. Also, learn how to enter shows, make your own hybrids, and treat your plant's illnesses. Good in any country where Cymbidiums are grown.

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- 181 Slc. Naomi Kerns 'Fireball' x Self — Red, Orange.
- 188 Lc. The Washington Post x Lc. Lee Langford 'Copper Queen' — Wine.
- 198 (Pot Hidden Range x Blc. Rain Forest) x Blc. Hemlock Pass — Green.
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A descriptive list of the 10 crosses, cultural information and deflasking procedure will be available on request.

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Cattleyas For The Beginner

Mrs. S. MEDCALF

The Orchid best known to the whole world is undoubtedly the Cattleya. Huge showy blooms look up at us from glossy magazines, chocolate boxes, greeting cards, etc. There is a universal use of this outstanding flower simply because it has such a great value in all display work.

There are more than fifty natural (or species) kinds of Cattleyas found growing wild in Central and South America. Some are found at 10,000 to 20,000 feet in the Andes, where the temperature falls below freezing, and some grow in the dense, steamy jungles around the Amazon. From this you can deduce that the genus *Cattleya* is possibly the most adaptable of all Orchid genera.

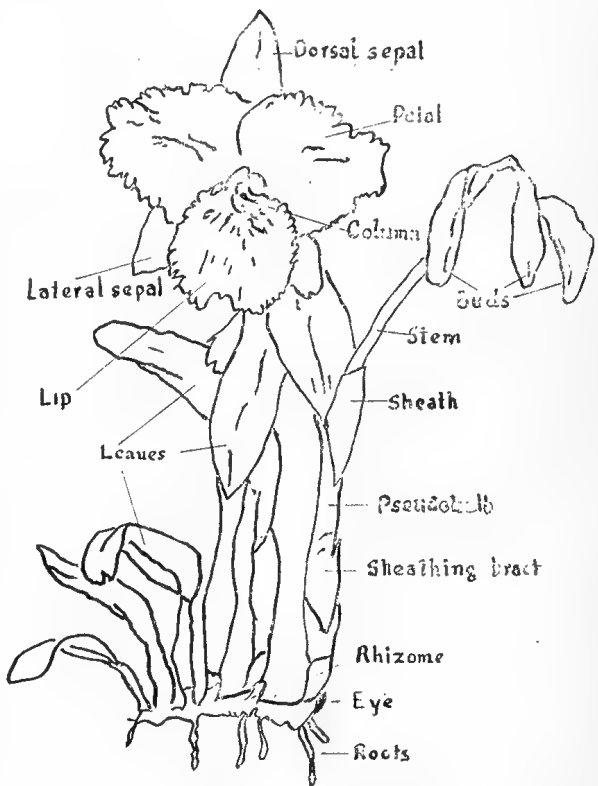
Most Cattleyas are amongst the easiest of orchids to grow. In the Sydney area a great number of them will grow in an ordinary bush-house without any cover at all. However, in the district of Parramatta and westward, there is always the chance of a severe winter with zero (or lower) temperatures. Then care must be taken to save precious plants from the burn of frost. This entails only the small effort of bringing the plants into the house during the cold nights. On winter days they can hang outside in full winter sunshine.

The enclosed sketch shows the simple parts of a Cattleya plant.

The problems facing a would-be grower of Catts are not great.

1. The choice of the first plant to grow.
2. Caring for that plant in relation to —
 - A. Light and shading.
 - B. Temperature and air movement.
 - C. Humidity.
 - D. Watering and the use of fertilizer.
3. Potting — at long last.

The choice of one's first plant is often a chance affair taken care of by a kind friend or — fate — just dumping one on the doorstep. Sometimes this is wonderful — but often it leads to the loss of one good future Cattleya grower. The first plant is of paramount importance. It is better carefully chosen. It must be sufficiently encouraging to ensure the making of a dedicated Orchidist. As with all plants some Cattleyas are steady and prolific bloomers and good growers — some



The structure of a Cattleya

are shy bloomers and weak in growth. To sustain interest for the grower, quick and hopefully spectacular results are a must.

Procure one adult Cattleya plant — (seedlings can be long-time discouraging) not a particularly choice one — but strong growing. It should have at least four good mature plump bulbs. These should show the signs where the older bulbs have flowered — preferably on each old lead. There should be room in the pot for at least a season's growth. It would save the lives of a lot of Cattleyas if each "first plant" was hung with a small sign round its neck reading "Please do not disturb". New growers seem to suffer from an irresistible desire to tip out their first plant and keep looking at what is happening under the compost.

The first rule for caring for a plant is to learn to leave it undisturbed. Proper care of a plant depends on basic factors which are each influenced by the others. These are light, temperature, humidity and watering.

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Pot. Lemon Tree 'Magic Fire'.

Mericlone, 2" pot \$5.00
C. Milton Warne 'Premiere'. Mericlone, 2" pot \$4.00

C. Chocolate Drops x Bc. Daffodil. 2" pot \$2.00
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D. Circe Gail AM-AOS. Mericlone, 2" pot \$7.50
Blc. Lucky Strike 'Stella'. Mericlone, 3" pot \$7.50
D. Betty Ho 'Waimea'. Mericlone, 2" pot \$4.00
P. Corningiana x P. Debbie Martian. 2" pot \$2.00
P. Harlequin x Self. 2" pot \$2.00
D. Mary Aries x D. Ewa Gold. 2" pot \$1.15
D. Gold Flush x D. Sunshine Glory. 2" pot \$1.15
Asc. Yip Sum Wah x V. Pukele. 2" pot \$1.30

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consistently very good light is required. Technically, this is from 2,000 to 3,000-foot candles, but they will tolerate more if the light is accompanied by high humidity and good air movement.

The novice grower probably has commonsense as his only means of measurement, and in simple terms, this means that the plant requires as much light as possible without injuring the plants. Cattleyas receiving too little light can be recognised by the dark rich green colour of the leaves.

Those receiving a proper balance of light, humidity and temperature, will have rather light yellow-green leaves. Too much light can burn black areas on the upper surface of the leaves.

Temperature — although Cattleyas come from tropical countries a lot of them grow at high altitudes where the air is cool and moist, especially in the morning and at night. Wind and mist blow over them each day. In Winter the daytime temperature should range from 60 to 70 degrees, and night having a minimum of 55 degrees. In Summer the temperature can go to 85 degrees or over, but prolonged exposure to such heat is harmful.

Air movement is necessary to all plant life and it is wise to see that the first Cattleya plant has a good position for living — away from sudden cold draughts and not in a damp, stagnant "dead spot" area.

Humidity — Catts do best when humidity ranges from 40 per cent to 70 per cent during the day, and less at night.

In our areas it is necessary to add moisture around and under plants on all warm days. In dark wet weather keep surrounds as dry as possible.

Watering and the Use of Fertilizer. Watering refers to wetting the potting medium and the roots of the plant. With a small number of plants, and plenty of time, plants can be soaked individually in a bucket of water. Every third watering — the bucket can have any recommended fertilizer added to the water. Remember only, that Cattleyas prefer weak food — about half the strength usually given to Cymbids.

When to water — is more difficult to state. The greatest mistake any beginner makes is to try to follow an arbitrary set of rules for watering. The amount of water a Cattleya requires depends on the prevailing conditions — weatherwise — and the conditions surrounding the plants.

No one can tell you what to do in your own area. You alone will learn what to do in your own environment. The type of potting compost, and its container has also to be considered as also the condition of the particular plant. More harm is usually done by over-watering than by under-watering, but a newcomer can be aided by commonsense. If in doubt about watering, gently slide the little finger down the inside of the pot. If it strikes moisture — right — keep water out of the pot but maybe spray on the ground underneath. Once a week watering is a good basis to work on, remembering heat will make it more frequent, and cold and wet will decrease the need for water.

Potting — Cattleyas are potted in many different media — most of them reasonably successful. Most beginners start by using fir bark because it is so easy to use and widely available.

It is to be hoped the first flowers will have been produced before there has been any thought of potting. Plants do not need re-potting each year. In fact, best results are usually obtained from a plant that has been about three years in the same pot. A good strong plant makes good strong flowers.

Happy growing!

AUTUMN SHOWS

Orchid Society of N.S.W. Autumn Show. Venue, Bondi Junction Plaza. Setting up Sunday, 2nd April. Show runs from Monday 3rd to Noon on Saturday, 8th April during shopping hours. For details contact the Show Marshal, Mr. Ron Chalmers, 25 Turriell Point Road, Caringbah 2229. Phone 525-7215.

Qld Orchid Society. Autumn Orchid Show (new venue) The Theatre, Brisbane Botanic Gardens, Mt. Coot-tha Friday 14th-Saturday 15th and Sunday 16th April. Setting up Thursday 14th April. Hon. Sec. Mr. Rod. Mackinney, P.O. Box 2002, G.P.O. Brisbane. Phone 341-6538.

Brisbane Orchid Society. Charity Orchid Show. Saturday 1st April and Sunday 2nd April, Zupps Motor Showroom, 1310 Logan Road, Mt. Gravatt. Hon. Sec. Mr. Frank Copelin, P.O. Box 94, Stones Corner, Brisbane 4120. Phone 397-2774.

Ipswich Orchid Society. Autumn Orchid Show. Saturday 8th April and Sunday 9th April, Merrell Motors Pty. Ltd., Showrooms, 34 Brisbane Street, Ipswich. Sec. Mrs. Gwen Stumer, Mt. Crosby. Phone 201-0126.

Eastern Districts Orchid Society. Autumn Orchid Show. Saturday 8th April and Sunday 9th April. Sec. Mr. F. Geary, P.O. Box 60, Guardian Angels School Hall, Bay Terr., Wynnum Sth.

Gold Coast Orchid Society. Autumn Orchid Show. Easter Saturday 24th March and Easter Sunday 25th March. R.S.S.A.I.L.A. Hall, Burleigh Heads. Hon. Sec. Mr. N. Wilesmith, P.O. Box 323, Burleigh Heads. Phone 35-5335.

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POTTING OF CATTLEYAS

GORDON COTTLE in the *South Australian Orchid Bulletin*

A cattleya is repotted for either of two reasons or for both: that it has outgrown its pot or the potting medium has broken down.

OUTGROWN POT: Different plants have different habits of growth. Type one develop in a nice, compact and circular type of growth, each successive growth adding to an ever-widening circle. Type two grow in a forking manner, whilst type three grow like "a crow flies", straight across the pot.

Now let us consider these three types: Type one: the circular growth — this type of growth is the ideal plant. It fills the pot without overgrowing the pot prematurely and it lends itself admirably to specimen culture.

Type two: the forking growth — this is an easily managed type with help of a little judicious partial backcutting.

Type three: the straight growth — this type is rather frustrating and the growth is mainly controlled by the knife.

POTTING MEDIUM BROKEN DOWN:

Plants in a medium that has broken down will soon deteriorate if left in the mix for any extended period.

TIMING: An important factor in the repotting of a cattleya is to pot when the new roots are just beginning to show at the base of the bulb. To repot when the roots are not in active growth can easily be to the detriment of the plant, with leaves yellowing and dropping off and pseudobulbs shrivelling.

ON REPOTTING: Assuming that it is a favourable time for repotting the plant, go ahead and repot. The main aim is to carry out the repotting with as little shock as possible to the plant. Let us now commence to repot a plant:

Plants grown in plastic pots are fairly easy to remove from the container; a thin blade slipped around the inside of the pot will free most of the roots. Another way is to squeeze the pot in your hand the idea being to flex the roots or some of them from the edge of the pot, then grasping the plant firmly about the pseudobulbs with one hand the other hand around the pot, gently pull with a slight rocking motion with the hand — this should free the plant from the pot with as little damage as possible.

A plant in a terra cotta pot! Well, I think it is better to break the pot rather than try to extract it.

Having now removed the plant from the pot, clean away all old potting mix because this plant is going to be in this spot for at least two years, maybe longer, and we don't want to repot it again in one year or so because we kept a bit of old mix. Throw out broken down compost — it is good for the garden but not in the pot.

Having cleaned all potting mix away, the next job is to trim off all old and dead roots and to shorten very long roots to about four inches. We cut long roots back because if we tried to repot these long roots the chances are that they could get broken and they would then rot in the pot, a condition we can well do without.

Now we have the plant cleaned off of all old potting mix, and all dead and old roots are trimmed back or cut off. At this stage don't start to divide the plant, instead consider what you want from it. Whenever you divide a plant it sets it back, so don't cut it unless you have to — the aim should be for a progressively larger plant. A Cattleya into a large specimen plant the same as any other orchid, so don't restrict the plant to a 20 cm pot but rather grow it to the size you want and can manage. If you want to fill a one metre pot go ahead and do it, just remember the limitations are on you not on the pot.

Before any repotting can be done the compost or potting media should be prepared. There are numerous potting media that may be used for cattleyas and they are selected for their mechanical properties not for what is in them, with perhaps *Osmunda* the exception. Cattleyas grown in *osmunda* need no additional fertilizer. Fir bark is what I use without any additions to stretch it. If fir bark or *osmunda* is used it should be soaked in water for one hour before use and then drained of excess water; by doing this it makes it receptive to water when applied to the pot.

Having prepared the plant, the next thing is to pot it. If it is to be grown into a specimen plant it can be put straight into the pot.

If potting in osmunda fibre, put a large piece of osmunda under the crown of the plant and then press pieces of about one or two inches square around the plant, with the grain vertical, until the pot is filled, then trim the osmunda off the top with shears to attain a neat finish. With fir bark all that is needed is a little shake to settle the bark as you pour it in.

Having repotted the plant it can be returned to the bench with the other plants. It need only be staked if there is any danger of the plant moving in the pot before the roots have anchored it securely, when firmly established the stakes may be removed.

If the plant is to be divided leave at least three bulbs for every division to ensure flowers on the next growth. It may be that the plant has, say, five bulbs — so what do we do? Easy, between the third and fourth growth cut about one-third of the way through the rhizome — this will stimulate the rear bulbs — and pot in the usual way.

After repotting keep the potting mix damp and spray the leaves frequently to further stimulate the plant.

CATTLEYSAS AND COLD

— From *Eastwood Orchid Circle News*

Cold certainly affects cattleyas if they have no protection from the weather. The damage is not apparent for some time, sometimes three or four months. The first sign of cold is the leaves usually turn yellow, then the bulbs shrivel a bit, then the leaves fall off the top of the bulb.

Frost is more severe. The leaf blackens by the end of a week and then goes slimy. When this is noticed remove the infected leaf immediately. If the bulb has also gone black cut it off about one inch above the rhizome. Then place the plant in a heated house and hope that it recovers.

Most cattleyas do not like temperatures below 10 deg. C, although some bifoliate types can tolerate very low levels. Some novelty types are very particular in their temperature requirements.

CATTLEYSAS AND HEAT

— A. Johnson in *O.S. of W.A. Orchid Bulletin*

The main problem in the hot weather will be excessive temperatures in the glasshouse, possibly accompanied by low humidity. Regular damping down of floors and benches is important. This is preferable to misting of the plants which may cause a build-up of salts on the leaves. Damping down will generate humidity and by the cooling effect of evaporation will keep the temperature lower than it otherwise would be. Circulation of air helps the evaporation rate, and, of course some new fresh air is required or the humidity would simply increase to near saturation and there will be no further evaporation and cooling.

"The Orchadian" in New Format

This journal of *The Australasian Native Orchid Society* has long enjoyed a fine reputation for botanical accuracy. For many years the recently retired editor, Mr. Murray Corrigan, carried out a stupendous job of producing the journal on a shoestring budget. He achieved a major cost saving by typing all matter for direct reproduction by the offset printing process. Of necessity this meant a ragged right hand margin and an overwide line. The work of typing a whole issue accurately was arduous for one man also involved with the problems of editing.

Members of A.N.O.S. owe a real debt of gratitude to Murray. He continues as Assistant Editor so the Society will continue to receive the benefit of his long experience.

Type setting in the December, 1977 issue is by computer, the column width is halved and the right margin aligned. A very legible typeface is used. The new format will be well received.

The journal is a must for all growers of native orchids. There are four issues annually, which together with membership of A.N.O.S., cost \$5 per year. Subscriptions should be addressed to The Secretary, P.O. Box C106, Clarence Street, Sydney, N.S.W. 2000.

BOOK REVIEW

"Australia's Native Orchids"

This book by W. Watson Sharp has been reprinted by the K. G. Murray Publishing Co. Ltd.

The first printing in 1970 was full of errors. These were pointed out to the publishers and the author at the time. It would be logical to assume therefore that these would have been rectified in a second edition.

But no! There would be from one to several errors per page, in nomenclature, spelling, description, habitat, even in some drawings.

A pity.

Don't buy it. Or let it creep into your society library. It will do a lot of harm among those good folk who buy it in good faith.

NATIVE ORCHID HYBRID LIST

The Australasian Native Orchid Society has published *A checklist of Australian Native Orchid Hybrids*. The list was compiled by Dr. N. J. Grundon of the Darling Downs Native Orchid Society. At Dr. Grundon's request the list was checked by the A.N.O.S. Council and published by them.

It is available from The Secretary, A.N.O.S., P.O. Box 106, Clarence Street, Sydney, N.S.W. 2000.

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—Robert Herrick

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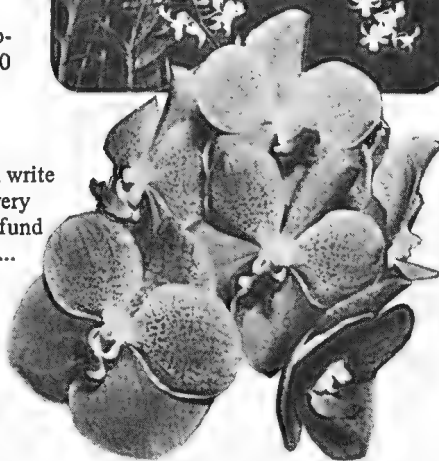
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STARTING WITH ORCHIDS

Background To Modern Orchid Horticulture

RONALD KERR

The December, 1977 article on acquiring your first plants deliberately made no mention of specific genera, except to generalise upon the fact that you should find plants suited to your area, and buy only the less expensive species or hybrids, chosen, if possible, by seeing flowering clones which appeal to you.

This is the safe approach until you acquire some experience. In the early stages your orchid housing will possibly be non-existent or improvised, and therefore inadequate for a wide range of genera.

Visits to localised specialised orchid nurseries will enable you to obtain the right advice regarding those easily-grown ones best suited to your conditions.

Orchids grow in conditions which are extremely hot to those which can be very cold. Naturally a type or species will have adapted to a particular environment and a knowledge of this background will assist you greatly in flowering it to perfection.

The variations exist because orchids are the largest of the plant families and members have adapted themselves to conditions in all countries except Antarctica. The family is represented as far north as the Arctic Circle and among the islands south of the famous Horn of South America.

In humid hot areas they have evolved as plants which grow on trees because the luxuriant growth of trees prevents most light from reaching the ground. Those plant types whose wind-carried seeds have been able to germinate on the bark of trees were the ones which survived and developed their own complex life style.

Orchids in lightly wooded or scrubby areas tended to keep to the ground. The percentage of tree growers, or epiphytes, to ground growers, or terrestrials, increases with proximity to the equator.

The most southerly growing epiphyte is the beautiful little *Dendrobium cunninghamii* which is found as far down as Stewart Island on the southern tip of New Zealand. However, terrestrials can be common in mountainous areas near the equator.

This huge family of plants is called by botanists *Orchidaceae* (pronounced or-ki-DAY-se-ee). Classification of the family is

still not complete and probably never will be because evolution is continuing, and the dividing lines between some divisions can only be a matter of subjective assessment.

The system of classification broadly followed by most botanists is that of Dr. Rudolf Schlechter (1872-1925) who divided the family into 88 sub-tribes, 666 genera and about 25,000 species. Schlechter's analysis has been modified by subsequent research and a third edition of his monumental work *Die Orchideen* is now being published in parts with revisions by Dr. F. G. Brieger. Parts published to date are available, in the German language, from the publishers: Paul Parey, 1 Berlin 61, Lindenstrasse, West Germany, at DM24 each.

Of the genera — a genus is a group of allied species — only a few have species with large or showy florescences, and these are the ones developed by horticulturists for cut flowers and hobby growing.

Innumerable small-flowered orchids have unique interest of some kind which makes them worthy members of many collections. This feature may be scent, colour, habit of growth, rarity, foliage, exquisiteness, mode of pollination, or whatever. This group is often referred to as "botanicals" and some growers specialise in such orchids.

GROWTH OF HORTICULTURE

The horticultural genera have a popularity which began during the early nineteenth century, soon after the formation in 1809 of the Royal Horticultural Society.

Prior to this event most importations to England had been by botanists and travellers. In 1812 the famous nursery of Loddiges and Sons of Hackney, near London, imported plants of the genera *Vanda*, *Aerides* and *Dendrobium* to sell.

A Mr. William Cattleya, in 1818, imported a quantity of tropical plants from Rio de Janeiro, Brazil, and around these a number of plants with springy stems and rhizomes had been used for packing. The dormant eyes on these were showing signs of activity and as a matter of curiosity Mr. Cattleya grew them on. He was rewarded by the flowering of *Cattleya labiata* for the first time in England.

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Orchid growing really caught on as a fashionable hobby under the patronage of the influential Duke of Devonshire who became President of the Royal Horticultural Society in 1838. His gardens became world famous, and he sent his own collector to India expressly to collect orchid species.

Professional nurseries were quick to follow suit and such firms as Loddiges, Low, Veitch and Sanders employed many overseas collectors. Henry Frederick Sander, the Orchid King, is said to have employed, at one period, twenty-three collectors foraging in the orchid-rich areas of the world.

Orchids were consigned to England in tens of thousands over a period which commenced about 1840, peaked in the 1880's, and dwindled to almost nothing by World War I. It says much for their hardiness that most of them survived the slow sea voyages.

In the cold English climate expensive growing houses with high maintenance and fuel costs made the new hobby a province of the wealthy. Outstanding forms of species, new species, and very rare species changed hands at fantastic prices. This concept of orchids being expensive has turned many keen gardeners away from the prospective pleasures of orchid growing. As will be shown this no longer applies, and, particularly where the climate is favourable, orchid growing can be one of the least expensive pursuits and certainly one of the most rewarding.

HYBRIDISING

The nineteenth century interest in orchids centred around species and a few natural hybrids, but man-made hybridising began as early as 1853 when Mr. John Dominy of the Veitch and Company nursery at Exeter hand pollinated *Calanthe furcata* with *C. masuca* as the donor parent. The cross flowered in 1856 and was named *Calanthe Dominyi* by Mr. Peter Veitch.

In those early days orchid seed was scattered around the compost surrounding a potted plant. Relatively few seeds germinated. Virtually no success was obtained with other methods and it was reasoned that microbial life in the compost was essential.

Mr. Noel Bernard, in 1909, showed that mycorrhizal fungi were the essential factors, and cultures were formulated into which the fungi was introduced. This symbiotic culture of seeds ensured a higher percentage of seedlings from a cross. Thus the falling off of imported species was matched by an increasing number of hybrids.

A dramatic breakthrough in seed culture came when Dr. Lewis Knudson of Cornell University during experiments on plant nutrition reasoned that orchid seeds could be germinated without the presence of mycorrhizal fungi, but using instead sugars and starches in conjunction with basic plant nutrients. His hypothesis, announced in 1922, was that the fungi created the sugars necessary for growth and the seed needed this nutrient because, due to its smallness, it had no inbuilt nutrient, or endosperm, of its own.

This hypothesis was greeted with some scepticism but practical experience proved him right. The original Knudson culture medium formula has been only slightly modified, and then only to suit certain genera and special circumstances.

It caused an orchid breeding explosion which has continued ever since, and which has brought the price of quality plants within the reach of everyone.

Briefly, the asymbiotic culture technique is to use a balanced solution of plant nutrients, held together by agar jelly, in sterile flasks. After the seed has been sterilised any amount of seed from a capsule can be used, limited only by the viability of the seed, the number of flasks available, and the potential of the cross.

Mass production in this way has made possible extensive breeding programmes aimed at improving desirable qualities, whether shape, texture, colour, size, floriferousness, flowering time, longevity, adaptability to a wider range of temperature, market suitability, and naturally, a combination of these factors.

MERISTEM CULTURE

The horizon of opportunity for the hobby grower widened in 1960 when Dr. George Morel of France established that cymbidiums can be propagated on a large scale by using the meristem or undifferentiated growing tip of a new shoot. The cells are kept from differentiating and grown into large masses in culture medium. They are then split up and grown as seedlings. The difference is that they will all be the same as the original.

By this means top award plants can be produced in quantity for sale at reasonable prices. It is now possible to buy a fine orchid capable of winning a championship at a show for as little as \$10. Without meristem culture such a plant would be worth hundreds and you would be on a long waiting list for a propagation.

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The technique is also successful with cattleyas, but only moderately so with other genera.

When you feel that you can handle your first plants it is time to select a few good mericlones. The latter is a word coined by Mr. Gordon Dillon, past secretary of the American Orchid Society to describe all such plants from the one clone. Choose plants you have seen in flower or which have received recent awards.

PLOIDY

Some terms will seem strange during your early days of growing orchids. Those relating to ploidy are frequently referred to in advertisements and catalogues and it is necessary to know what they mean as an aid to evaluation.

Famous stud plants stand out in orchid culture and these will be discussed when dealing with each horticultural genus.

Invariably such plants have been found to have a more complex structure in their basic cells. Most plants have living cells which are diploids, each cell containing a fixed number of chromosomes. The latter contain genes which are the factors influencing heredity and therefore plant characteristics. On fertilisation they split to form a haploid, or cell with half the normal number of chromosomes. The male haploid combines with the female haploid to form another diploid.

Thus the characteristics of both parents produce new characteristics in the progeny. This side of orchid culture you will find fascinating to explore as your knowledge of growing them increases.

A few individuals or clones are not diploids. By some chance of mutation, maybe the freakish stimulus of radiation, or a peculiarity of nutrition, even a fortuitous chemical influence, they have doubled their cells and become tetraploids.

Such clones are noted for flowers of strong texture, broad segments, and other desirable features.

A tetraploid crossed with a diploid produces mainly triploids or flowers with three times the haploid number. Triploids are generally hardy and of good flower form, but are sterile as parents.

Nurseries breeding cymbidiums usually now indicate the ploidy of parent plants, or state the anticipated ploidy of the progeny. This is not always possible with other genera.

A recent development is the treatment of seeds and meristems during flasking with a

chemical called colchicine which induces polyploidy in a high percentage. Colchicine treated flasks sell at about twice the price of untreated flasks.

Meristems of good diploids treated this way are being converted to tetraploids of improved substance and shape. Side by side the diploid and the colchicine induced tetraploid of the same clone could well be regarded as different orchids. Currently the orchid world is wrestling with the nomenclatural problem of how to designate the two forms.

In buying orchid seedlings it is advisable to be familiar with the following terms.

Haploid. The unit into which a cell splits on mitosis to unite with another such unit and thus form a new individual.

Diploid. Usually written with the symbol 2N. The vast majority of living clones are diploids, but the haploid number varies between genera, and occasionally between species. The diploid or 2N number for the genus *Cymbidium* is 40, and for the genus *Dendrobium* 38. The haploid number is the number of chromosomes per cell. Each chromosome contains genes which determine the characteristics of the plant.

Tetraploid. A clone in which the chromosome count per cell is four times the haploid number. Generally referred to as a 4N.

Triploid or 3N. A clone with three times the haploid number, the result of a cross between a tetraploid and a diploid.

Polyploidy. A clone with three or more chromosome sets. Clones exist with five, six, eight and even sixteen times the haploid number.

Aneuploidy. Polyploids in which the chromosome count is not an even multiple of the haploid number.

Species. The basic unit of botanical classification. It comprises a group of individuals with common attributes and which interbreed freely. The term cannot apply to hybrids. Note that the spelling is the same for both singular and plural.

Thumb through the articles and advertisements in this issue. You will obtain a good insight into the basic genera grown in Australia. Note that the genus *Cattleya* is dealt with in detail in this issue. In future articles other genera will be dealt with in detail.

Join an orchid society if you can. Visit nurseries. Buy a few of the plants which you find can be easily grown in your area.

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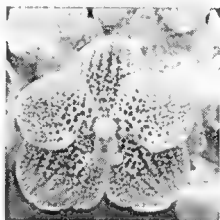
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FOUNDATION BACKS SELF HELP WITH CASH

Just how does the Australian Orchid Foundation carry out its plans for the betterment of orchid species? Many good folk are still in doubt about the objects and methods of the Foundation.

Some regard it as a body purely for Australian orchids and possibly the name is ambiguous. However, its declared aims cover all the orchid family although Australian orchids receive top priority.

WIDE AIMS

However, current projects have proved just how wide are its aims. They include species seed importation and exportation and anyone can buy or supply seed. Keeper of the Seed Bank is Mr. Jim Lawler who may be contacted at the Department of Biochemistry, University of Sydney.

Flasks of odontoglossum alliance seedlings are currently on sale through nurseries (see advertisements in December and this issue) as one means of financing the Foundation. These flasks are available by courtesy of Mr. Gerald McCraith who is Australia's foremost grower of this alliance.

The Foundation is also contributing towards the expenses of Dr. Stoutamire during his Australian visit. Dr. Stoutamire is well known for his detailed studies of Australian terrestrials.

To help the interesting work on terrestrials taking place at Canberra the Foundation has financed construction of a seed shaking table.

SELF HELP

Organisations and individuals are invited to make suggestions for practical orchid projects to the Foundation. One such project in embryo is a possible Orchid Science Workshop covering a complete week-end course in orchidology.

Projects incorporating a large measure of self help have most chance of acceptance. A splendid example is the West Australian conservation project below. The two letters say everything.

Dear Mr. McCraith,

I am writing to enquire if the W.A. Native Study and Conservation Group (Inc.) can obtain some funds from the Orchid Foundation to fence ten acres of land at Salmon Gums, in the south-east of this State.

The reason for fencing this land is that recently an Orchid species was relocated there. The species, *Caladenia cristata*, has not been found for some 50 years. The area where it was relocated is approximately 400 miles from its original collection site at Miling, in the Murchison district.

The land involved belongs to a neighbour of one of our Members, Mr. Don Voigt. Mr. Voigt's neighbour is a farmer and has indicated that he is in favour of fencing the land but is not in the situation where he can afford to do so himself. The cost of the fencing has been estimated by Mr. Voigt as \$200. Mr. Voigt and group members have volunteered to do the labour so our main worry is providing the materials.

The matter is rather urgent as the farmer concerned will be turning sheep onto the land no later than January 1978.

Therefore, on behalf of the W.A. Native Orchid Study and Conservation Group, I am asking that the Orchid Foundation consider our request for \$200 for fencing materials to preserve this species.

We hope you will find your way clear to grant this request.

M/S Linda Penny, Hon. Sec.

Dear M/S Linda,

I was most interested in receiving your letter dated 6th December, 1977, and because of the obvious urgency of its contents, I contacted some of the Directors and members of the Research Committee of the Foundation, and all were unanimous that the Foundation should support your request for funds to fence in these ten acres for the purpose of providing protection for this small population of *Caladenia cristata* that has been rediscovered after being "lost" for 54 years. I am partly familiar with the area at Salmon Gums, and we have no doubt that when this area is enclosed, a number of other species will be allowed to survive and become established because of this protection.

Mr. Don Voigt and other members of the W.A. Native Study and Conservation Group are to be congratulated, firstly, for the rediscovery of the species, and secondly, for being practical and doing something effective for the protection of this species. The Foundation is grateful in being able to join your active Members in this wonderful and practical project.

The Foundation would like to send a letter of appreciation to the farmer who is allowing this area to be enclosed and we would be grateful for his name and address in due course. We feel that this generous act of nature should be recognised and publicized to all orchid lovers and enthusiasts.

The Foundation would appreciate more details of this project as soon as time permits, also several photos of the project, a photo of the general area of the site, one of the working party, and one of an area where the plants are growing.

Don Voigt did send to me several photos of *Caladenia cristata* but each of these are not quite suitable for re-production, one good slide if available would be appreciated. It's a thoughtful project, and once again, your members are to be congratulated for their efforts to preserve this very rare species.

On behalf of the Foundation, I have much pleasure in enclosing this cheque, so that the planning of this project can begin without any delay.

On behalf of the Directors,
Gerald McCraith

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The genus *Laelia*

should be in every collection

Obviously the type of collection illustrated, while making a dramatic picture for the tourist and a rare living for the collector, demonstrates the depletion of native habitats.

Probably this Mexican collected his mass of *Laelia grandiflora* (syn. *L. speciosa*) from one of the vast areas being cleared for agriculture in tropical areas, and his efforts may result in the saving of a few.

Laelias do well in most populated parts of Australia and many nurseries propagate them intensively by division and seed.

The Mexican (and contiguous areas) section of the genus are cooler growing than those from Brazil. The former do well under cymbidium conditions in Australia, the latter require much the same treatment as cattleyas.

Flowers are somewhat like small cattleyas to which they are related. The distinguishing feature is that the genus *Laelia* has eight pollinia, whereas *Cattleya* has four.

Flowering times mentioned below may vary with your local climate. Recommended for any collection are these Mexican species:

L. anceps. Short pseudobulbs and single rigid leaves. Has two or three mauve-purple flowers on a long stem. Grows well in a pot or on a slab, and can be built up to specimen size in a few years. There is an alba form. Flowers in winter.

L. grandiflora. Pseudobulbs ribbed and about two cm long with one or two leaves. A short stem carries one white and pink flushed flower. Fragrant. Flowers early spring. Frequently sold under the names of its synonyms *L. speciosa* and *L. majalis*.

L. autumnalis. Longish furrowed pseudobulbs. Flowers like a stronger coloured *L. anceps*, with up to nine per spike. Fragrant. Frequently referred to in Australia under its synonym *L. gouldiana*.

The Brazilian section is characterised by longer pseudobulbs and striking flower colours. Some of these have been widely used to bring intensive flower colours into intergeneric crosses such as *Laeliocattleya* and *Brassolaeliocattleya*.

Some of the outstanding species in this group are:

L. cinnabarina. Noted for pseudobulbs up to 30 cm tall with solitary leaves about the same length. Up to 15 flowers on a 60 cm stem, each about six cm wide. Usually bright cinnabar red, but variable. Flowers late winter.



Photo from A. N. Mullin of Mexico through courtesy of G. Hermon Slade.

L. flava. Characterised by stout pseudobulbs to about 20 cm tall, with solitary lance-like and tough leaves. Up to 12 flowers six cm wide. Colour varies between clones from orange-yellow to golden. Flowers last well and come in spring or early summer.

L. purpurata. The National Flower of Brazil and very showy. Pseudobulbs to 36 cm, narrow at base. Three to seven flowers on a strong stem, each up to 16 cm wide, long-lasting and fragrant. Basically white, with variable flushes of purple and veining. Summer flowering.

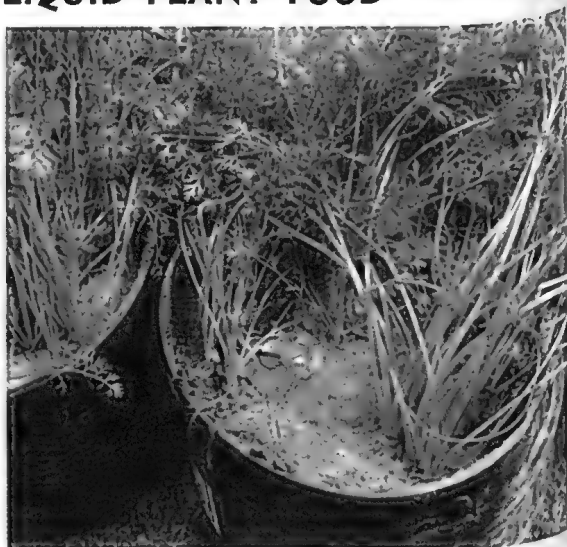
L. tenebrosa. Growth like *L. purpurata*. Has a huge loose and showy flower which does not last long, brownish-yellow and very fragrant. Has been used extensively in hybridising. Flowers in early summer.

There are about 70 other species.

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BOOK REVIEW

*The Genera of Orchidaceae
in Hong Kong*

This book by Dr. Shiu-ying Hu, published by The Chinese University of Hong Kong, will astonish and please botanists, and prove of inestimable value to serious orchidologists. Dr. Shiu-ying Hu has made world wide botanical field trips and she has worked for thirty years in the Arnold Arboretum of Harvard University.

It is written in the English language. It will astonish the erudite who may not have thought it possible for 110 species and 50 genera to be found in an area of 404 square miles; it will please the pedantics for its obvious detailed scientific research and accuracy. Above all it will attract the serious orchidologist for its careful reconciliation of botanical and horticultural data.

The work does not only cover species native to Hong Kong but also 14 introduced genera.

It is amazing that of the 110 species 32 are endemic. An area of similar size with 30 per cent endemic orchids would be hard to find anywhere in the world.

Orchid appreciation is deeply ingrained in the people of China but orchidology as a science is new. In this book there is virtually a blending of traditional aesthetics and western technology which makes it unique.

This is exemplified in the chapter entitled *Origin and Meaning of the Generic names of Hong Kong Orchids* in which the generic name and derivation is given, together with the Chinese name in both English and Chinese. Each description is virtually a short and absorbing story.

The first chapter deals with *The basic features of the orchids of Hong Kong*. No one can read it without gaining a greater appreciation of the distinguishing features of the respective genera.

Illustrations in line technique show features clearly so that recognition of a species can never be in doubt. Nineteen species are illustrated in colour, including the one on the cover of *Cymbidium maclehoseae*. The latter is a little gem to the extent that one wonders why it hasn't figured as a parent for minicymys.

Emphasis is on orchids in Hong Kong and this allows for mention of 14 exotic genera. The 50 native genera are in 23 subtribes, four tribes, and two subfamilies, classified according to Schlechter. There is almost an in-

credible morphological diversity for such a small area.

As elsewhere ruthless collection is forcing some species to extinction, compounded by the fact that eight species have reputed medicinal value.

The apparent phenomenal endemism extends to other plant families and to some extent may be due to contiguous areas being less thoroughly researched.

The book has 160 pages, each 260 x 180 mm. The index could be more comprehensive, for instance of the four cymbidiums in the text only two are in the index.

Apart from its local value, which will be tremendous, this book is valuable to orchidologists everywhere. It is recommended for use in society and reference libraries because of its translation of botanic technicalities into terms the horticulturalist can understand.

Price is HK\$60, equivalent to \$A14. It is available from The Chinese University Press, C/- The Chinese University of Hong Kong, Shatin, N.T., Hong Kong.

TASMANIA HERE WE COME

There's a dastardly rumour emanating from a certain western State that Taswegian Ron Mansfield was despatched to the Fifth Australian Orchid Conference to coax everyone to visit our southern State in two years time with bribes of free Tassie beer, biscuits and cheese.

Why anyone would think that bribes were necessary to induce anyone to visit Tasmania for the Sixth Australian Orchid Conference is hard to imagine. It has magnetic charms which will draw us all thataway in '79.

What a chance for we mainlanders to get away from our sin-ridden cities, if only for a few weeks. In any case if you feel like a little sin down there you can do your dough quite legally in the Wrest Point Casino.

Tasmanians are working hard to make October, 1979 a great event for all orchidophiles. They started State Orchid Conferences about ten years ago so don't lack know-how.

Remember: Sixth Australian Orchid Conference, October, 1979: Be there.

WHAT ROT

— Ruth Rae in *The Grafton Orchid World*

Many of the rots that trouble the orchid grower are difficult to deal with because it is not always readily apparent whether they are caused by a fungus or a bacteria. Some of them take hold so rapidly that the only thing to do is to try everything.

First of all remove all damaged areas. Cut away infected leaves and stems as much as possible. Remove top inch of compost and replace with fresh. Dip plant and pot in a solution of Naphrine, then dry carefully. Spray with Benlate, a systemic fungicide. Some growers in Grafton have had great success recently with arresting necrotic spots on leaves of paphiopedilums by sprinkling them with Phaltan powder, and keeping them barely moist for several weeks.

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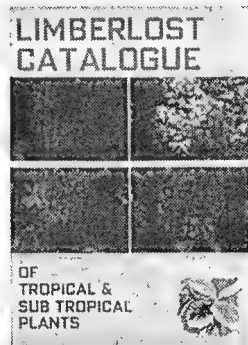
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Blackmen's Spears and Orchids

Dr. P. LAVARACK

From an article in the *Queensland Native Orchid Bulletin*.

In these days when, even in remote areas, food is as close as the Landrover icebox, medical aid as close as the wireless and the only militant blacks are in the capital cities, Cape York travellers have little idea of the problems facing the explorers over 100 years ago.

It was very different on April 29, 1848, when Edmund Kennedy and his expedition of twelve fellow explorers landed from the barque "Tam O'Shanter" in what is now Kennedy Bay a little south of the present town of South Mission Beach. Only three men were to survive this disastrous expedition of eight months and one of them was William Carron, a botanist and second-in-charge of the party.

Carron's narrative of the expedition, written after his rescue near to death from Weymouth Bay, contains a few interesting references to orchids written at a time when most of our orchids were unnamed.

We first find Carron, full of energy, earnestly searching for new plants. He went first to the rocks of Tam O'Shanter Point just north of the initial camp. Here he records:

"... some beautiful epiphytal orchideae; one beautiful specimen of *dendrobium* (rock lily), with the habit of *D. speciosum* but of stronger growth, bearing long spikes of bright yellow flowers, the sepals spotted with rich purple. I found also, another species with smaller leaves and more slender habit, with spikes of dull green flowers, the column and tips of the sepals purple. Also a very fine *cymbidium*, much larger than *C. suave*, with brown blossoms, having a yellow column."

I visited those rocks a year ago and found *Dendrobium discolor* there. This is almost certainly the "*Dendrobium* with the habit of *D. speciosum*" observed by Carron. Similarly *Cymbidium madidum* occurs in the beach scrub, but just what the other species is I am not sure. Perhaps it was *D. canaliculatum* which does occur nearby but it would be an unusual colour form. It is worth remembering, however, that Carron was not able to

preserve his specimens or presumably his detailed notes. Any other guesses what this orchid may be?

On July 29 near the foot of the Cardwell Range a little south of Tully Falls Carron found "a beautiful orchideous plant, with the habit of *Bletia Tankervilleae*, flowering in the same manner, with flower stems about three feet high, and from twelve to twenty flowers on each stem. The sepals were much larger than those of *Bletia*, and of a rich purple colour; the column yellow, with a spur at the base of the flower about three-fourths of an inch long. I packed some of its thick fleshy roots in a tin case". This was almost certainly *Spathoglottis paulinae* although one has some doubts about the statement that "the sepals were much larger than those of *Bletia*" (*Bletia tankervilleae* is now of course *Phaius tancarvilleae*).

On August 9 they camped on top of the range at "upwards of 2,000 feet" after struggling up an extremely steep jungle-clad slope with about 80 sheep and 20 horses. Here Carron remarks on "several very interesting Epiphytal orchidae". These would no doubt have included the usual highland plants such as *Dendrobium ruppianum*, *D. adae* and *D. agrostophyllum*. Up to this stage Carron had, despite the hardships of the expedition, been collecting plants avidly. Now, however, it became clear that members of the party had been helping themselves to the already depleted food stocks and Kennedy, needing someone he could trust placed Carron in charge of the supplies. This meant that Carron could seldom leave the camp and from here on he acted more as a combined cook and policeman than as a botanist.

By November 13 the expedition had already dragged on much longer than expected; food was beginning to run short and almost no game had been shot. Many of the men were seriously ill, no more sheep remained and only nine horses remained, the others having been killed and eaten as they grew weak. It was clear to Kennedy that the fittest of the party should push on to seek help at Cape York where a boat awaited them.

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Wish to thank the many friends and registrants who visited his nursery during the 9th World Orchid Conference and would like to apologise for not spending more time with each and every one, but with the arrival of so many visitors and groups it was a very difficult task.

Many thanks to everyone

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Carron was left in charge of a group of eight men at Weymouth Bay. Constantly threatened by unpredictable natives, and desperately short of food they awaited rescue for 47 days. At the end of this time only Carron and one other remained alive so feeble they were scarcely able to even lift their rifles.

Unfortunately it was necessary for Carron's rescuers to abandon his specimens as the aborigines were closing in on the small party. Had these specimens found their way to Sydney there is little doubt that many of our tropical orchids would now bear different names.

The story of Kennedy's death and Jackey Jackey's faithfulness are well known — but who has heard of William Carron, most dependable of Kennedy's ill-fated expedition?

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NORTH COAST O.S., NAMBOUR

At the twenty-second (22nd) Annual General Meeting of our Society the following office-bearers were elected for the ensuing 12 months:

Patron: Mr. E. R. W. Whitehouse; President: Mr. W. A. (Bert) Richardson; Snr. Vice-President: Mrs. B. M. Robertson; Jnr. Vice-President: Mr. Graham Willersdorf; Hon. Secretary: Mrs. Vera Usher; Hon. Treasurer: Mrs. Joan Paroz; Editor/Publicity Officer: Mrs. Doris Mitchell.

Cultural meetings are held in the C.W.A. Hall, Short Street, Nambour, on the fourth Thursday of the month at 7.30 p.m. Visitors are cordially invited to attend.

The Autumn Orchid Display will be staged in the Foyer of the Civic Hall, Nambour on Friday and Saturday, 28th and 29th April, 1978.

Arrangements are well in hand for the Annual Spring Orchid Show, to be held on the 1st and 2nd September, 1978 in the Civic Hall, Nambour. President is Mr. W. A. (Bert) Richardson and Secretary Mrs. Vera Usher. They may be contacted at P.O. Box 140, Nambour, Qld. 4560.

WHYALLA ORCHID CLUB GROWS

For its size the Whyalla Orchid Club is a mighty force in South Australia's second city.

Last year the Club held its 12th Annual Show. It was in a huge shopping complex and was viewed by thousands.

Said Club Secretary, Mrs. W. Hawkes, "I find it a credit to the members to show Whyalla's people that with a little hard work and patience they can grow such fine products in Whyalla's lovely yet sometimes hot and windy climate".

Whyalla has an average rainfall of around 250 mm per annum.

At a time when it had only 35 members the Club mustered a contingent of nine for the Fourth Australian Conference in Sydney — a greater percentage by far than any other society. A special trophy was awarded for this effort. A strong party also attended the Perth Conference.

The Club now has round 60 members of whom four attended the recent Ninth World Orchid Conference in Bangkok last January.

Keen! Whyalla city can be proud of its orchid club.

TOWNSVILLE O.S. ACTIVE

The Society has organised a series of lectures on orchid growing for Adult Classes at the Ignatius Park College.

Members attended the Fifth Australian Orchid Conference in Perth and staged a splendid cut flower display. This was awarded a silver medal.

Last year the Society celebrated its 30th anniversary, a feature of which was the cutting of a special Anniversary Cake by foundation member and Patron, Mrs. Nott.

WARRINGAL ORCHID SOCIETY

Since the item in December, 1977 re this Society it is learned that the President is now Mr. J. Curley. Prospective members in the Heidelberg, Victoria area may contact him by phone at 354-3032. Secretary is Mrs. M. Murray, phone 49-3408. The meetings take place on the first Wednesday in each month at the Heidelberg Bowling Club, Stradbroke Avenue, Heidelberg. Visitors are very welcome.

STORAGE OF POLLEN

The Newcastle O.S. Bulletin reports that pollen can be kept in a home freezer. Place the pollen in a piece of waxed paper, fold, and place in a glass tube with a small amount of dried calcium chloride. Seal with a rubber stopper. Optimum frig. temperature is around 38°F (8°C).

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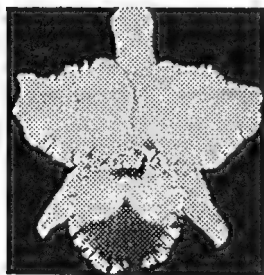
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Judging Standards For Novelty And Miniature Cymbidiums Through The A.O.C.

B. M. CARDWELL

Growers will be aware that all States have now adopted a judging standard for Novelty Cymbidiums (for a trial period) and such standard will now permit granting of A.O.C. awards and facilitate provision of a separate section, at shows, for Novelty Cymbidiums.

A Novelty Cymbidium must have flowers not more than 75 mm in width whereas the Miniature Cymbidium flower must not be more than 65 mm. However, although the Miniature standard requires the *plant* also to be miniature (i.e. *both* bulbs and foliage) this is not the case with plants to be judged under the Novelty standard.

Although literature from overseas has referred to Polymins which is a reference to the breeding lines used; so far as Australian standards are concerned, whether or not a plant is a Novelty Cymbidium is decided on the size of the flower irrespective of breeding, i.e. it must not be more than 75 mm.

Experience in N.S.W. in judging both Miniature and Novelty Cymbidiums under the standards now in use has revealed that there is often a good deal of confusion amongst growers as to whether their plants should be entered at shows, etc. in the class for Miniatures or for Novelties when there are two separate classes. They are prone to consider only the size of the flower and overlook the fact that to be eligible as a Miniature both bulbs and foliage must be miniature. This has presented some difficulties and Show Marshals should endeavour to advise growers of the correct class for entry of their plants. However, there is no very clear line of demarcation in regard to bulb and foliage size which is a decision of the judges concerned. The N.S.W. judging panel has considered this difficulty and it appears desirable, in fairness to growers, that if plants entered in the Miniature Cymbidium class are considered ineligible by the judges concerned because of plant size that the judges offer the Marshal the opportunity to re-enter them into the Novelty class.

A point which appears to confuse growers is that some clones vary in size of bulb according to growing conditions. A case in

point is the mericlone *Cym. Leodogran 'Cradlemont'* which can correctly be entered as a miniature if grown with small bulbs and foliage, but which easily becomes eligible only for the Novelty class if grown in too large a pot or with too much feeding even if the flowers are still not larger than 65 mm.

It will be evident from the standards published below that with both Miniature and Novelty Cymbidiums the standards call for the flowers to be well displayed without much interference from the foliage and that the judges are required to consider the general effect of the exhibit. The Miniature standard calls for a fair proportion of the flowers to be visible when the plant is viewed and for the spikes to be sufficiently long to display the flowers away from the foliage. The Novelty standard requires the flowers to be displayed without interference from the foliage. In both cases the standards mention "overall charm and distinction" and it is therefore expected that the plants will display their flowers adequately *without the foliage being tied back*.

Miniature and Novelty Cymbidiums therefore, with leaves tied back are not in the condition expected on the show bench, although such tying of leaves is often seen with standard cymbidiums. The judge could perhaps undo the ties to see if the flowers still showed themselves satisfactorily.

There appears little else in the standards below which requires clarification.

Novelty Cymbidium — Judging Standard

This classification is to encourage the development of miniature type cymbidiums that would not ordinarily qualify under the miniature cymbidium classification. In this class, a plant need not be miniature in growth characteristics in order to be acceptable, but the flower must not exceed 70 mm in size.

Shape — 20 POINTS

The flower should be circular in outline, slightly concave and well balanced, hooding, furling, reflexing and other distortions are undesirable, the labellum should be wide and lend balance to the flower, the distal end should not turn under.

Colour — 25 POINTS

Shall include white or any other colour or combination of colours, it should be glistening and fresh,

all markings and shadings should be evenly distributed. The colour of the labellum should be pleasing and shall be considered in assessing the general effect. Uneven colouring of the sepals is a defect. Floriferousness of plant — 15 POINTS

A plant with several racemes evenly distributed is desirable, all or nearly all of the flowers should be fully open, a minimum of 10 flowers on each raceme is desirable.

Flower Arrangement — 15 POINTS

Each raceme should display its flowers without interference from the foliage. It may be straight, arching or pendulous, the flowers well and evenly spaced. Bunching is a defect.

Substance and Texture — 10 POINTS

The flower should be firm, fresh and lustrous without blemish.

Overall Charm and Distinction — 15 POINTS

The foliage should be firm and fresh without blemish, with all dried tissue removed. The whole plant should have an indefinable quality of charm, attractiveness and distinction. New or rare colours or combination of colours, attractive labellums, outstanding habit of raceme are qualities to be assessed under this heading. When judging novelty cymbidiums the rules concerning percentage of assessment for shape and colour shall be disregarded. Awards granted carry the title of "Novelty Cymbidiums".

100 Queens Rd., Connells Point 2221



Mrs. Ratcliffe at Dallas, U.S.A.

This photograph was taken on the occasion of a presentation to Mrs. Ratcliffe. Pictured are Mrs. Rosemary Graham, Mr. Joe Meador who is Vice President of the American Orchid Society, and Mrs. Edna Ratcliffe on the right.

BOOK REVIEW

The Enchantment of Paphiopedilums

An Anthology of Facts and Fancies

by EDNA RATCLIFFE

This is no technical dissertation on the genetics of breeding, or dry and detailed cultural instructions, rather a charming book for pleasure. As we meander through the chapters there is enough of all of these matters to please the general reader as well as satisfy the Paphiopedilum grower. Sound, simple, commonsense advice to the beginner on selection of plants, backgrounds to the breeding of some of the outstanding varieties, thoughts on growing orchids in the home (with Edna sneaking out to the Ratcliffe glasshouses at night to "steal" treasured plants for her house collection), to hints on the future promise of current breeding programs.

One suspects that like many others, Edna Ratcliffe has a little bet each way and that whichever flower she is looking at is the immediate favourite, for her affections embrace species, primary hybrids, right through to the giant exhibition hybrids — as with many of us even the flowers which do not quite measure up to standard have their own charm. As she points out, Paphiopedilums are not the cold beauties which imperfect understanding might convey, and her remarks on perfumed varieties give food for thought.

Speak to anyone who has met the legendary Edna Ratcliffe and the universal word is "charming", and her warmth comes through in this book. Those who keep a little group of favourite books on the bedside table for that odd ten minutes before the light goes out will want to add this little gem. Open it at random and read for five minutes or work from cover to cover, you will gain pleasure from this store of fact, fantasy, and nonsense. A book for book lovers as well as orchid lovers, but the book lover may well find himself in both camps.

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From the Tasmanian O.S. Newsletter.

VALE

LATE CYRIL DAVIS

Victorian O.C. members mourn the death, which occurred late last year, of Mr. Cyril Davis. He was a Past Vice President, a committee member for many years, and a Judge. Mr. Davis was noted as a grower and regular exhibitor.

THE LATE NADA WATTS

Shoalhaven O.S. members mourn the death of Mrs. Nada Watts who for many years was secretary and stalwart worker for the Society.

She retired only recently as secretary and was awarded life membership by a grateful membership. Her influence will live on.

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Australian Orchid Review

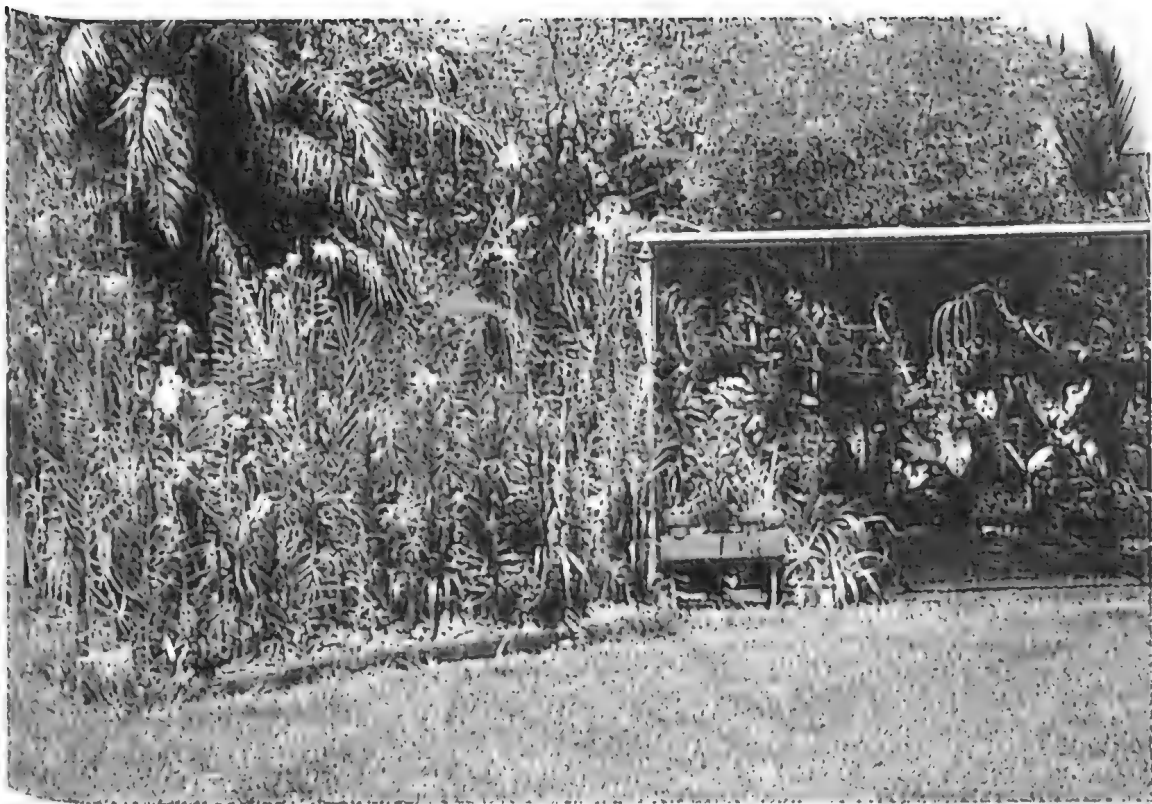
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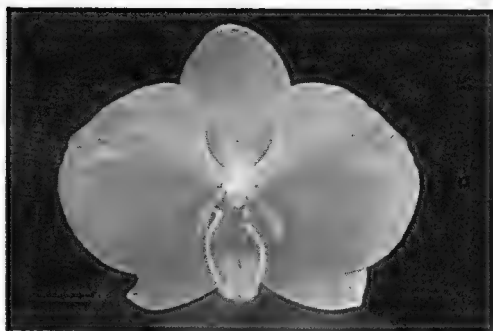


A Darwin Orchid Collection

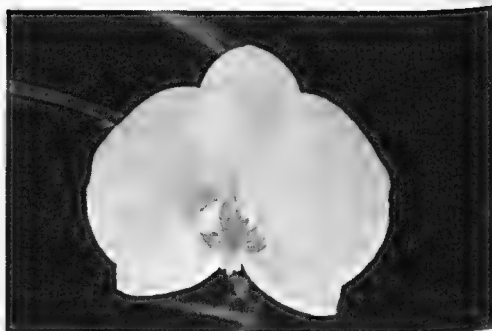
See Mr. John Womersley's report on his visit to Darwin growers

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Bexley, Sydney 2207**



WILLANDRA ORCHID CO. PTY. LTD.

DUE TO WORLD CONSERVATION THIS MAY
BE YOUR LAST OPPORTUNITY TO OBTAIN MANY OF THESE ORCHIDS

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WILLANDRA ORCHID CO. PTY. LTD.
P.O. BOX 90, DEE WHY, N.S.W. 2099

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SDK	SABRE DANCE 'Kensington' AM/AOS \$10.00 One of the finest dark rust-red flowers with large bright red lip. Mid-season.
NGM	NANDI 'Green Mist' AM/AOS \$12.00 Large clear apple green — long sprays.
LLI	LILLIAN STEWART 'Imperial Velvet' BM/CSA \$8.00 The darkest Lillian Stewart — deep pink.
YLC	YORK 'La Cumbre' HCC/AOS ODC \$10.00 Rich yellow blooms having definite orange-red lip markings. Late.
FMK	FUSILIER 'Man of Kent' \$8.00 Exceptional pink. Highly productive. Mid-season.
KEM	KINGLET 'Emerald' AM/AOS \$8.00 Large golden green with entirely red lip. Early.

NEW CATTLEYA MERICLONES AVAILABLE IN SIZE B = 4" TALL

AWK	Bic. AMY WAKASUGI 'La Tuilerie' \$12.00 Very dark Normans Bay hybrid, with perfect shape.
BRG	Bic. BRIGITTE 'Roche D'Or' AM/NOS \$12.00 Bright golden yellow flower with deep velvety magenta lip.
DOL	Lc. DOLLIE ANN COLE 'Boissy' \$10.00 Burgundy, red petals and sepals; ruby red lip with orange throat.
JMC	Lc. JANICE MATHEWS 'Ceylon' \$9.50 Glowing chestnut brown, six flowers per stem.
OGI	Bic. ORANGE GLORY 'Empress' FCC/RHS \$10.00 Rich lemon yellow flowers with a frilled lip.
PAS	Bc. PASTORAL 'Innocence' \$10.00 Outstanding white.

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MS321	CYM. MARY MARGARET 'GRANADOS' FCC/AOS, GM/CSA Mericlone giving well formed, light green blooms, good production	4" Pots \$7.50
SS334	CYM. VIA REAL (SUSSEX DAWN 'HOT SPRINGS' x ETTA BARLOW 'DEL MAR') A remake of this famous cross giving glistening white exhibition blooms	4" Pots \$3.50
SS412	PAPH. KEZAR 'ZERTUCHE' HCC/AOS, BM/CSA x FOREST GLADE 'DEL MAR' HCC/AOS, BM/CSA Large fully formed, spotted blooms with good stems	4½" Pots \$10.00
SS192	ANGRAECUM VEITCHII Large cream blooms, long-lasting	3" Sq. Pots \$3.50
SS376	LC. BONANZA 'KLONDIKE' x (LC. SOUTH ESK 'JUDY DOIG' FCC/AOS x LC. BONANZA 'PAYDIRT' AM/AOS) Exhibition quality lavenders with dark lips	3" Sq. Pots \$3.50
SS375	LC. BONANZA 'KLONDIKE' x (C. LADY ALEXANDER x GIGAS x INTERMEDIA 'AQUINII') Two-tone lavender splashes	3" Sq. Pots \$3.50
SS263	LC. BONANZA 'CORNUCOPIA' AM/AOS x LC. WAINAE SUNSET 'POKAI' AM/AOS, HOS Expect rich fiery lavenders through to art shades	3" Sq. Pots \$3.50
SS505	VANDA EISENSANDER 'ALBA' x THANCHAI 'LENAVAT' Expect tall spikes of large yellow blooms, heavy substance	3" Sq. Pots \$3.50
SS368	ASCCA. BONANZA 'DREAM CITY' x V. PUKELE 'RED JOHN' Expect deep red to fiery orange	3" Sq. Pots \$3.50

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ROY DEANE

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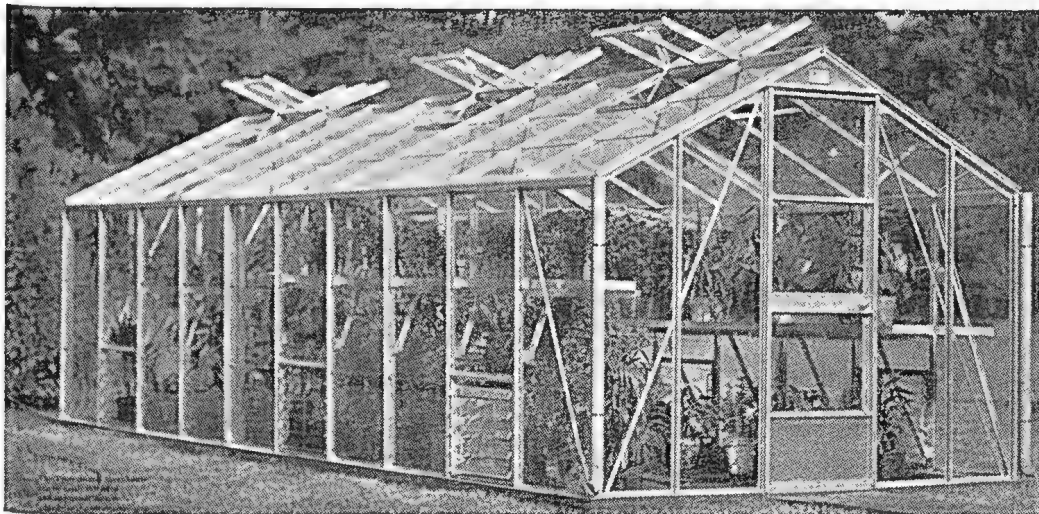
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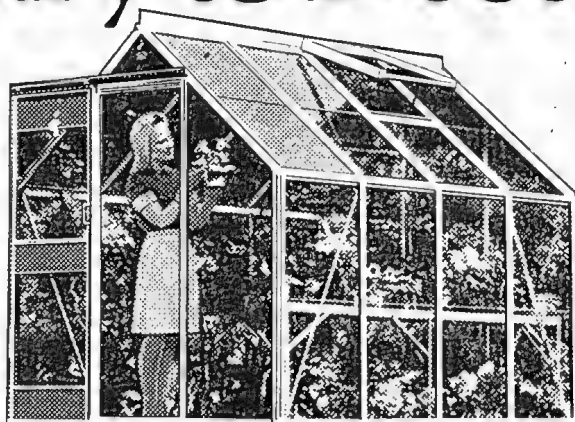
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without need of putty. As to optional accessories—go as far as you like: sun shades, extra ventilation, downpipes, separate compartments, modular shelving and benching.

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CYMBIDIUM TETRAPLOID COLOUR

FLASKS AVAILABLE

N.B.: The letters '+C' indicate that the seedlings have been colchicine-treated. All flasks \$45 each. Colchicine-treated flasks \$55 each except where otherwise stated.

We consider our 1978 crosses to be the most colourful diploid and tetraploid crosses offered. We consider them to possess a good quantity of award potential clones and early ordering is recommended. An example of what will be available is listed hereunder; however, we invite you to apply for **our full flask offering**, in which we use parents such as —

Bexley Radiance 'Bexley' (best red, Third Australian Conference);

Sensation 'No. 1' (a tall spiking brick red, carrying in excess of 17 well formed flowers — erect spike, no stake needed);

Sensation 'Chianti' (champion red — 4th Australian Orchid Conf.);

Mimi 'Sophee' (a superb red miniature);

Sensation 'Vieux Rose' (a champion red and fine proven breeder);

Tom Thumb 'Calliope' (a sensational heavy textured green miniature — superb lip);

Kurun 'Magie' (erect spike, July red);

Zuma Boyd 'Yowie Bay' (an awarded July green);
and other superb early and colourful cymbidiums.

EXAMPLE OF CROSSES

X181. Zuma Boyd 'Yowie Bay' AM/AOS x (Hamsey x Wallara) 'Hove'

Tetraploid greens, pinks and golds in July and August, of award potential.

X192. Angelica 'Advent' AM/RHS x Hamsey 'The Globe' AM/RHS

Tetraploid golds and pinks in July and August. Definitely of award potential. Both clones are proving excellent parents and the progeny expected to produce high yield.

X194. Kurun 'Magie' x Sensation 'Vieux Rose'. +C

July/August reds and pinks when we need these colours.

X240. Highlander 'December Charm' x Sirius 'Golden Dawn'. +C

June tall spiking diploid and tetraploid golds carrying good flower count at a time when there are no golds.

Several others. Don't be disappointed. Apply for full flask list offer now.

PLEASE NOTE — All flowering times are based on South Australian weather conditions.

Quantity Discount: (A) Orders exceeding \$200 — 10% Discount;

(B) Orders exceeding \$500 — 25% Discount
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Full Range of Mericlones — Seedlings — Cymbidiums — Phalaenopsis —
Cattleyas — Paphs. ("Ratcliffes")

MERICLONES

Cymbidiums — Cattleyas — Miniature Cymbidiums "McBeans"

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Please send 30 cent stamp addressed envelope.

COMMUNITY POTS OF CATTLEYAS — 10 plants

Powringeara v. Harwoods x Lee Langford 'Pacific Sun' — Bifoliate — all colours \$20.00

Sylvia Fry 'Supreme' x Hertha Wondabah — few left — limited \$25.00

Malworth Orchidglade x Pacific Sun \$25.00

CYMBIDIUM SEEDLINGS — COMMUNITY POTS of 5 Plants \$15.00. 10 Plants \$25.00

Angelica 'Advent' x Joan Luth 'Joy' — early showbench — export yellows, pinks, golds
expected.

Angelica 'Advent' x Pacific Atoll — early greens — yellows. Showbench — export.

Pacific Atoll x Wiena Cindy — early large yellows — greens.

PHALAENOPSIS COMMUNITY POTS of 10 Plants

Betty Conroy x Gladys Read 'Snow Queen' F.C.C. \$25.00

Bruce Shaffer x Alice Gloria — superb whites — exhibition type \$25.00

Viroochen Malibu Queen x Gladys Read 'Snow Queen' — pinks and spotted \$25.00

DPTS Red Lip x DPTS Pueblo Jewel x Ella Freed \$25.00

These plants are sturdy and ready to be planted singly in 3" Pots.

Freight Extra.

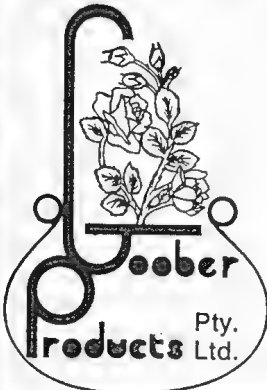
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This is a mixture of peanut shells, trace elements and molasses which
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BOTH PRODUCTS ARE AVAILABLE IN A POWDER FORM

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Every Day
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**OUR ORCHIDS ARE WORLD FAMOUS FOR
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NEW EXCITING CATALOGUE AVAILABLE AS FROM 1ST MAY, 1978
ON REQUEST POST FREE.

ERROR — price Paphiopedilum 2" Pots should have read \$3.50 in March issue A.O.R. This is very much regretted.

NEW and UNUSUALS

All plants full mature growths flowering size unless pot size shown.

Paph. stoneii Borneo — 4-5 flowers open to 8" long — limited	\$40.00
Paph. linii Borneo — single flowered long stem — 2 only	\$35.00
Paph. — unknown new discovery — 2 only	\$40.00
Phal. violacea Bornea type	\$35.00
Phal. cochlearis Bornea — recent discovery; would be good for breeding	\$40.00
Phal. maculata Bornea — strong yellow	\$42.00
Phal. sumatrana Bornea — strain heavy bars	\$40.00
V. hastifera Bornea	\$45.00
V. sumatrana Bornea — strain selected — 1 only	\$65.00
V. dearei — heavy texture, fragrant Bornea — 1 only	\$47.00
Asctm. henderonianum — small bright red — 2 only	\$35.00
Den. Chaing Mai Beauty (Den. Cynthia Jane x Gold Flush) — yellow red lip meristem F/S	\$25.00
Den. Madame Uraivan (Madame Chulii x May Neal 'Srisophon') — B/S yellow/red lip	\$15.50
Den. American Beauty x Gold Flush — bluish meristem — B/S	\$34.50
V. Rothschildiana 'South East Breeze' — best of the blues meristem 3"	\$20.00
Den. Bhodi Nguen 'Summer Cloud' — shapely whites, meristems 3"	\$22.00
Den. Alice Splading — yellow with red lip — F/S	\$20.00
Onc. Josephine HCC-OSSEA — F/S	\$26.00

PAPHIOPEDILUMS — bred for the cut flower trade by R. & E. Ratcliffe, England.

2" Pots \$3.50 — long flower spike, flowering at each growth.

CF39 Paph. Wings of Song x Flight Path — spotted.
CF42 Paph. Domina x Comely Ann — reds.
CF43 Paph. Palestra x (Dazzler x Canberra) — spotted.
CF46 Paph. (Dazzler x Canberra) x Calyshot 'Serene' — spotted.
CF47 Paph. Flying Free x Dazzler — spotted.
CF52 Paph. Flight Path x Wings of Song — spotted.
CF51 Paph. Western World x Oakham — spotted, very limited.
CF53 Paph. Capital World x Flight Path — spotted.

PAPHIOPEDILUMS — Exhibition and Award Potential.

7023 Paph. Dazzler 'Ruby' x Paeony 'Mulberry'	2"	\$4.50
7044 Paph. Lyric 'Glendora' x Paeony 'Mulberry'	2"	\$4.50

OUTSTANDING INTERGENETIC HYBRIDS

A412 Beallara Tahoma Glacier 'Sugar Sweet' AM-AOS x Milt Purple Queen 'Midnight' Beallara has 3" spike 5" flowers lasting one month x royal purple Milt.	2"	\$3.50
A410 Odm. uro-skinneri x Onc. Gold Coin Butte — exceptional vigour	2"	\$3.00
1999 (Odontonia Santos x Milt. St. Martins) x Milt. clowesii 'Lamarkeana'	2"	\$3.00
2239 Onc. varicosum 'Rogersii' x Catherine Tompkins — large yellow flowers	2"	\$3.00

DENDROBIUMS AND MISCELLANEOUS GENERA — 2" Pots \$2.00 unless otherwise marked.

D616	Den. Atikit x May Neal — yellows, red lip.	
D623	Den. Theodore Tachiguchi x Jaq-Hawaii) — whites, red lip.	
D613	Den. Lois Anderson x Darcie Mikami — whites, red throat.	
D623	Den. Theodore Tachiguchi x (Theodore Tachiguchi x Jaq-Hawaii) — whites, red lip.	
D625	Den. Uraivan 4N x Uraivan (4n) — tetraploids whites	\$3.00
D628	Den. Singapore White x (Doreen x Lim Chong Min) — large white some pink flush.	
D626	Den. May Neal 'Srisophon' x Uraivan — good yellows, shapely.	
D627	Den. Dark Victory x Hahawa Beauty — off-colour, could be bluish.	
0385	Opst. Lanna Thai x Rhy. gigantea — rich reds	\$3.00
0386	Vandopsis Sagarik — bright orange to reds	\$3.00
0389	Rhy. Blue Angel x Aerdv. Vieng Ping — for Aerdv. in blues	\$3.00

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- 103/70 (Lc. Lee Langford 'Linda Vista' x Lc. Pacific Sun) x Sibling
Rich golden to apricot shades 5½" \$5.00 Larger Plants \$6.00
- 58/71 Lc. Jindabyne (L. purpurata, Werkhauseri Oculata x
(C. intermedia Aquinii x C. Suavior, Aquinii)
Very strong grower — splash petals
expected 5½" \$5.00 Larger Plants \$6.00
- 77/72 C. Forbesii x Lc. Chine Bouton D'or
Golden summer blooms 4½" \$4.00

SPECIAL OFFER

Mericlone Pot. Gordon Sui 'Red Radiance' AM/AOS. Flowering size 5½" \$10.00 each
Mericlone. LC/Lee Langford Copper Queen HCC. 4" \$10.00.
Mericlone. 32/73 (Rhycospylis Gigantea x Rhycospylis Repusa — white) x Sibling.
4" pot \$4.00, 5½" pot \$5.00

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Catalogue sent on request.

VACHEROT AND LECOUFLE IMPORTED CATTLEYA MERICLONES

Sizes: C — 6" tall; D — 2 years from flower; E — 1 year from flower; F — flowering size.

RICH PURPLES AND LAVENDERS

ALC Lc. ALCIDOR 'LA TUILERIE'. Magnificent flower with dark purple lip. Upper half of lip and throat plain golden yellow	Size D/E	\$20.00
ALW. Lc. ALFREDO MARTINELLI 'WANDA'. Deep purple. Very good shape. Heavy texture. Size C		\$12.00
AWF Blc. AMY WAKASUGI 'FORTUNE' AM/TOS (Lc. Bonanza x Blc. Herons Ghyll). Deep colouring and shape are the main qualities of that remarkable Blc.	Size B/C	\$15.00
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CA Lc. CULMINANT 'LA TUILERIE' GM. Patent 2658. First class producer	Size E/F	\$30.00
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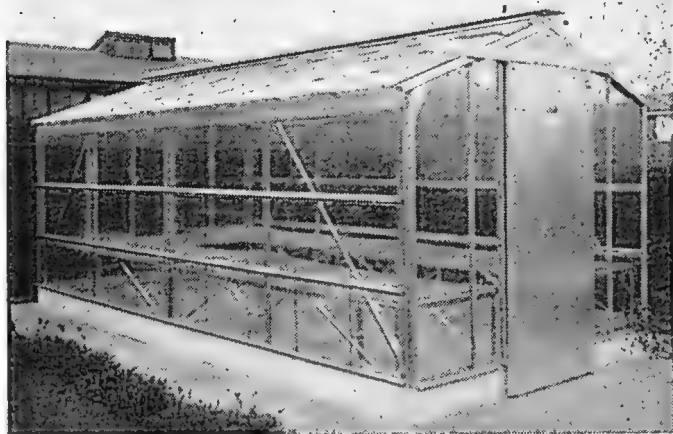
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Subscription: Aust. \$6.00 per annum.
Surface mail Aust. \$8.00 (U.S. \$12.00) per annum. Airmail Aust. \$14.00 (U.S. \$18.00) per annum.
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COVER STORY

The remarkable recovery of Darwin after the devastation of cyclone Tracy is an effort for which its people can be proud. During the reconstruction the Darwin Orchid Society gained new vigour and is now a mightier force than before the cyclone. Mr. John Womersley, who is an expert on the growing of tropical orchids, helped re-establish the Darwin Botanic Garden, and on his journeys there, took the opportunity of meeting the members of the Darwin Orchid Society.

The Stories Behind the Colour *Cymbidium* Illustrations

See pages 78 and 87

Cymbidium Highland Mist has been the most successful cross at recent Australian shows. Outstanding clones include 'Lalchere' AM/AOC-OSNSW, 'Barrita' champion cymbidium at the Fourth Australian Orchid Conference, 'Dillabirra' champion at the fifth, 'Kersbrook' a South Australian champion.

The ancestral line goes back to *C. Eburneo-Lowianum* made by the Veitch nursery in 1889.

C. Eburneo-Lowianum 'Concolor' x *C. insigne* are the parents of *C. Alexanderi* of which the 'Westonbirt' clone, a chance tetraploid, is the most famous stud plant in cymbidium history. This famous plant has been used five times in the lineage.

The parents of *C. Highland Mist* are *C. Mary Ann* and *C. Miretta*, and it was hybridised by McBeans and registered in 1968.

Cymbidium Sleeping Beauty. The Sleeping Beauty grex was the result of a planned programme to produce non-staining "pure colour" cymbidium flowers.

"Pure colour" cymbidiums are the result of breeding to eliminate anthocyanins, the red-purple pigments, and thus obtain flowers which do not have dark streaks from sun exposure. Many of these crosses have the prefix "Sleeping" in their name.

Sleeping Beauty has produced many beautiful clones in yellow, green and white.

Award and show winners in this grex include the clones 'Classic', 'Emerald Pendant', 'Molten Gold', and 'Prophecy'. New generations of "pure colours" are coming forward with improved shape, and bred for early or late flowering.

Breeding goes back seven generations. The species *C. lowianum* has been used five times in the lineage including the natural "pure colour" *C. lowianum* var. *concolor*. The pure colour genes are recessive in nearly all clones but can be selectively concentrated by breeding. Other species in the make-up are *C. eburneum*, five times; *C. grandiflorum*, three times, the rare *C. l'ansonii*, twice; *C. insigne* eight times, and its variety *parishii* once.

Cymbidium Joyce Duncan. Named by Dr. Ian Duncan of Sydney for his wife, this fine grex has several awarded clones. The clone illustrated is typical of most of the cross: intense green segments and bold lip strongly marked with red. Parents are *C. York Mere-*

dith and *C. Nicky*, both fine greens. It is ninth generation. The green species predominate in its ancestry, plus a strong infusion of *C. eburneum* which provided the genes for shape and substance via the famous *C. Alexanderi* 'Westonbirt'.

Cymbidium Sensation. This cross, registered by Wondabah in 1961, is aptly named. Up to that time efforts to produce really good reds had not been very successful. This was due to the dominance of white genes in most breeding lines influenced by *C. Alexanderi* 'Westonbirt'.

Looking back to the species used in nine generations of crossings to produce *C. Sensation* it is at first hard to see where the red genes emanate. They are absent or recessive in all the species used, namely: *C. eburneum*, used six times and ivory white; *C. lowianum*, eleven times and yellow green with reddish veins; *C. tracyanum*, also yellow green but with strong reddish-brown markings; *C. grandiflorum*, once, green with red spotted lip. Rarely used *C. l'ansonii*, which is predominantly yellow has been used four times.

Red came strongly into the line when *C. l'ansonii* was mated with *C. insigne* by Mr. G. Hamilton Smith, who registered the grex in 1919 as *C. Ceres*. Most of the progeny flowered pink or red. The best red was the clone 'F. J. Hanbury' awarded FCC/RHS in 1931. This clone has been widely used in hybridising.

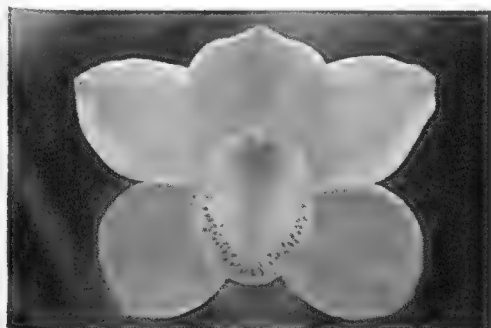
C. Sensation 'Chianti' is one of the best of the grex and has been freely available as a meristem. Other awarded clones are 'Vieux Rose', 'Arminya', and 'Imperial', all of which have been used as parents.

Cymbidium Mem. Robert Casamajor. This grex comes from a crossing of *C. Balkis* and *C. Apollo*. The clone 'Luath' was used in an Australian make of this cross in combination with *C. Apollo* FCC/RHS. Some outstanding clones have surfaced in the cross in colours generally white, but some are yellow. Shape, texture, size, and spike habit have been consistently good.

The cross converges two strong breeding lines: *C. Balkis* which has been strongly influenced by *C. Alexanderi* 'Westonbirt', used in the third and fourth generations, and *C. Apollo* in which *C. Alexanderi* 'Westonbirt' appears as two of the grandparents.

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▲ *C. Sensation* 'Chianti'

Typical of the cross, this clone is winning consistently at shows. See background description.

▼ *C. Highland Mist* 'Barrita'

Some say other Highland Mist clones are as good as 'Barrita'. Read about them elsewhere in this issue.



▲ *C. Sleeping Beauty* 'Eureka Lemon'

The Sleeping Beauty cross was symbol for a new line of breeding in which Australia leads the world. Described in this issue.

Photos: A. B. Porter

Cymbidium
trend
setters
of the
seventies

INFLUENTIAL BREEDING LINES IN CYMBIDIUMS

RONALD KERR

The value of looking at the past is the guidance it gives to the future.

Today, in Australia, we have top ranking cymbidium nurseries offering the finest range of seedlings available in the world. If our pockets and facilities could stretch to enable us to have a reasonable number of each cross we would be certain of some award types better than current show winners. Most of us are limited to buying only a few seedlings each year and therefore some careful assessing of what is available is very necessary.

The wonderful cymbidium hybrids of today are the result of up to ten generations of selective breeding. The best of each cross emerge from show and award competition and they are then tried as stud plants. Major nurseries now check the ploidy level before deciding to use a plant for breeding. Frequently the progeny from new breeding plants, after years of labour and waiting, don't come up to expectations.

Cymbidiums are a genus of about 70 species, many of them small and terrestrial, but those used to initiate *standard* hybrid breeding lines are few in number. Only recently have the smaller species been used extensively to produce miniature and novelty types. These are sufficiently different for them to be dealt with as a separate section in a future issue.

Cymbidium hybridising began less than 100 years ago. The first recorded one, between *C. eburneum* and *C. lowianum*, made by the famous Veitch nursery, pioneers of orchid hybridisation.

In those days seedlings were raised by sprinkling seed on the compost around a plant, and, of course, the yield was low.

Messrs. Veitch received an FCC/RHS in 1889 for their achievement. In 1895 their clone *C. Eburneo-Lowianum* 'Superbum' also received a FCC/RHS. The following year Sir Trevor Lawrence received the FCC/RHS for another clone.

The most important clone from this cross was undoubtedly *C. Eburneo-Lowianum* 'Concolor' for which Sir George Holford received a FCC/RHS in 1903. Mr. H. G. Alexander, who managed Sir George's orchid collection crossed one of the earlier clones with *C. insigne*, registered as *C. Alexanderi* in 1911.

Mr. Alexander took over the Holford collection as a commercial establishment and in 1916 re-made *C. Alexanderi* using the 'Concolor' clone. From this came *C. Alexanderi* 'Westonbirt', awarded FCC/RHS in 1922. It was acclaimed as the finest cymbidium to that time, and is now recognised as the most influential stud plant of all time.

There were other fine awarded plants of the cross, but AWB as it is often referred to, soon proved itself a better parent than the rest.

We know now that this was because of the doubled ploidy: 80 chromosomes per cell instead of the usual 40.

Co-incidentally the arrival of this fine breeder was the time Dr. Knudson developed asymbiotic flask culture which gave hybridisers the means to breed hundreds of plants from the same seed pod.

Up to the Second World War English nurseries, such as H. G. Alexander Ltd., Low, McBeans, Armstrong & Brown, Black & Flory, Sanders; and, in Belgium, the firms of Pauwels et Cie., and Sanders et Fils, undertook extensive breeding programmes under the impetus of strong public demand for these exciting new hybrid strains. The war slowed them down, but England is still a source of top crosses, in spite of the growth of American and Australian firms.

THE GENE BASE

The species on which these breeding programmes were based were few, and only rarely, apart from miniatures and novelties, is a species seen in a breeding line different to the nine below:

C. eburneum Ldl. Has narrow pseudobulbs and leaves, the latter to 60 cm long. Flower stem is erect with large sheath. The stem carries one or two fragrant, long lasting, flowers to 8 cm wide. Segments have firm texture and are ivory white in colour, relieved by purple spots around the yellow disc of the labellum. It comes from the Himalayas, around Sikkim and the Khasia Hills, extending into Burma.

C. eburneum var. *parishii* (Rchb. f.) Hk. f. This grex is shown in Sander's breeding lines as *C. parishii* but botanists regard it as a variety. Leaves are broader than the type and pseudobulbs absent. Stem is short with usually three flowers, occasionally more, each

about 8 cm with firm, broad, ivory white segments and more colour in the lip than the type. It is found in Cambodia. A particularly good clone of this variety was used in early breeding and it is shown in early registrations as *C. parishii-sanderæ*.

C. giganteum Lld. Characterised by large ovoid pseudobulbs and metre long keeled leaves. Flowers are 10 cm wide, long lasting and slightly fragrant, with up to twelve to a raceme. The tepals are yellow green with red-brown longitudinal stripes. Lip yellowish spotted with red. It comes from the area bounded by Nepal, Bhutan, the Khasia Hills and Sikkim.

C. grandiflorum Griff. The R.H.S. Registration Authority uses this name but the correct name is *C. hookerianum*. The plant is similar to *C. giganteum* but the flowers are larger and more fragrant. Flower tepals are green, the lip pale yellow with reddish dots. It flowers in winter around Nepal, Sikkim, and Bhutan, and is difficult to grow and flower in warm climates.

C. insigne Rolfe. The metre long narrow leaves rise from a small pseudobulb. The raceme is over a metre long with from 12 to 20 flowers, each about 9 cm wide. The tepals are pale rose, darker towards the base. The lip is reddish, spotted with purple-red and with yellow lamellae. It grows in Viet Nam as a terrestrial. There is an album form.

C. lowianum Rehb. f. Similar in habit to *C. giganteum* but a raceme can carry up to 30 flowers, or more, each up to 10 cm wide. Tepals, which are the segments other than the lip, are green-yellow with reddish veins. The lip is red-crimson with yellow edge and white base. The yellow column is spotted with red. It has a variety *concolor* which is a clear yellow green with an orange blotch lip. Found in Burma.

C. tracyanum Rolfe. Foliage like *C. giganteum*. Arching raceme is about a metre long with up to 25 large flowers. Tepals are yellow-green with longitudinal red-crimson lines and spots. Lip is yellow with bright red-crimson bars. It flowers early and is fragrant. Found in Burma and Thailand.

C. erythrostylum Rolfe. A species only occasionally used no doubt due to the forward thrusting habit of the petals. It carries up to seven very large white flowers. The lip is also white with some purple spotting. It has been used to increase flower size and obtain early flowering. Its late introduction into breeding has created a whole new chain of possibilities

due to one of its hybrid progeny being a tetraploid. (See *C. Early Bird* 'Pacific'). It comes from Indo-China.

C. pansonii. This is a rare plant from northern Burma and has only occasionally been used in hybridising. The flowers are predominantly yellow, strongly marked with purple-brown. The lip is large, pale and spotted. It evidently has recessive red genes because when crossed with *C. insigne* it produced *C. Ceres*, clones of which have flowers varying from pink to red. *C. Ceres* red genes must be dominant because the red is conveyed to its progeny. It has an arching raceme of up to twelve flowers.

Possibly the most influential of these species was *C. insigne* with its large white flowers suffused with rosy pink. Many of today's top hybrids have it appearing six to eight times in their lineage. *C. eburneum* imparted texture and shape but reduced number of flowers severely. *C. lowianum* increased flower numbers and aided colour. *C. grandiflorum* (a synonym of *C. hookerianum*) broadened the flowering period and introduced green genes. *C. erythrostylum* gave flower size and early flowering. Colour came from recessive genes in *C. pansonii* and *C. insigne*.

THE GREAT TETRAPLOIDS

A truly great chance tetraploid, or 4N, resulted from the crossing of *C. insigne* and *C. lowianum*, registered in 1911 as *C. Pauwelsii*. It was bred by Pauwels et Cie of Belgium. Nine clones of this cross received high awards, but it was *C. Pauwelsii* 'Comte de Hemptinne' FCC/RHS, a golden pink, which proved the fantastic stud plant.

Many crosses from AWB and Pauwelsii 'Comte de Hemptinne' produced splendid highly awarded clones which failed as breeders because they could not produce viable seed. At that time hybridisers were not aware of ploidy, or chromosome structure of plant cells. Their 4N studs were being mated with fine 2N plants resulting in triploid progeny: 2N plus 4N equals six and divided by two this means cells of 60 chromosomes instead of the normal 40 chromosomes.

Triploid plants are usually sterile because when cells divided on mitosis — or union of two parent cells — the thirty chromosomes from the triploid could not combine with the 20 from the diploid because 30 is not a multiple of 20 the haploid number. Some triploids did produce viable seed, generally in combination with 4N cells. In such cases the

amount of seed would be small and aneuploidy, or uneven chromosome numbers, likely.

Until this factor was realised hybridisers found that promising breeding lines was failing for want of viable seed.

The great stud plants of this era were chance tetraploids with twice the normal chromosomes.

One notable exception to the triploid sterility was the clone *C. Dorchester* 'Alpha'. The cross was registered in 1931 by Armstrong & Brown from the crossing AWB (4N) and *C. Tityus* 'Perfection' (2N).

This plant was parent, with President Wilson 'Westonbirt', of the famous grex *C. Dorama*. A clone from this grex *C. Dorama* 'Fairfield' HCC/OSNSW has been used extensively in Australia for hybridising, and another 'Charm' FCC/RHS has produced outstanding progeny in England and U.S.A.

Crossed with *C. Pearl* 'Magnificum' (*C. Alexanderi* x *C. grandiflorum*) by McBeans *C. Dorchester* 'Alpha' produced an outstanding white tetraploid in *C. Pearl-Easter* 'McBeans', which, crossed with other tetraploids, established a whole new line of splendid plants.

With *C. Rosanna* (*Alexanderi* x *Kittiwake*) it produced *C. Mary Ann*. *C. Mary Ann* 'Simplicity' has dominated Australian show benches since the mid sixties and is now proving a successful parent.

The crossing of *C. Olympus* (*Alexanderi* x *Vesta*) with *C. Pauwelsii* 'Comte de Hempinne' by Mr. Alexander produced the grex *C. Babylon*. Its clone 'Castle Hill' proved an exciting parent. It is a rich pink and crossed with greens and yellows has produced plants in a wide variety of attractive colours. These often lack the roundness of shape imparted by the *C. Balkis* line of breeding.

Mr. Alexander crossed AWB with *C. Kittiwake* (*Dryad* x *Gottianum*) 'Holfords' AM/RHS to produce the famous *C. Rosanna* grex, of which the clone 'Pinkie' received FCC/RHS in 1931. The genes of this strong breeder influence many of the seedlings currently available. Its white, flushed rose, flowers tend to be cuppy, the racemes short and arrangement of flowers poor, but it has given good flower shape and filled in segments to its progeny.

The crossing of two such outstanding tetraploids as AWB and *C. Rosanna* 'Pinkie' was bound to be interesting. The result was *C. Balkis*, a grex which contains more award-

ed clones than any other since hybridising began. The clones 'Exbury', 'Perfection', and 'Silver Orb' have proved excellent parents in England and U.S.A., and 'Luath' has been widely used in Australia. If seedlings have *Balkis* in their ancestry they are worth favourable consideration. One point to remember, however, is that *Balkis* crossed back to its parent *Rosanna* or grexes closely related to *Rosanna*, have, in general, poor spike habit.

SOME DIPLOIDS

While tetraploids have been the dramatic parents, steady improvements in combining desirable characteristics ultimately depends on the effective use of diploid plants. There is much less chance of sterile matings with diploids.

C. Claudona 'Rajah' has proved a splendid breeding diploid for shape, size and spike habit, but is somewhat weak in colour. It was registered by McBeans in 1946 and received FCC/RHS in 1950.

C. Doris Aurea. There is doubt regarding its registered ancestry of *C. Chiron* x *C. Lysander* since the progeny exhibit strong *C. erythrostylum* characteristics, which species is not present in the breeding lines of the given parents. The clone 'F. J. Noonon' has a golden bronze flower with a large band of crimson in the lip. In breeding this clone imparts size and shape while being recessive on colour. Crossed with *C. San Miquel* (*Doris Aurea* x *Sicily*) it produces lovely greens. With AWB it produced fine creams and yellows. With *C. Grand Monarch* (*C. grandiflorum* x *C. Wiganianum*) it produced huge flowers in the cross *C. Richard Shaffer*.

C. Heathrow 'Mary Bea' was bred in California by Armacost & Royston. In the hands of Mrs. Mary B. Ireland it has become one of the most famous diploid stud plants. It is early, free flowering, and the flowers have fine lips and good colour. It produces progeny that are white, blush white and green.

C. Ramboda 'Colossal' has proved an excellent diploid. Colour is a muddy green but other factors won it an FCC/RHS. The raceme is long and arching with up to 16 flowers. The lip is huge. It has been a parent in the famous crosses *C. Ramesis*, *C. Claudoda*, and *C. Ramley*. If you are looking for seedlings with flower size potential check to see if these are in the ancestry.

A tetraploid cross AWB x *Balkis* was named *C. Joan of Arc* by Mr. Alexander in 1943. About 30 of its clones have been

awarded, one of them four times. In America this clone 'Mem. David McLean', has been widely used as a stud. Some clones have been used for breeding in Australia and its seedlings are well worthy of consideration.

C. Pauwelsii 'Comte de Hemptinne' and *C. Rosanna* 'Pinkie' was a union of two fine tetraploids registered as *C. Nam Khan* by Lionel de Rothschild in 1941. The grex contains several tetraploids. Crossed with *C. Profita* (*Profusion* x *Rio Rita*) it produced *C. Anita*, clones of which have large arching sprays of splendidly displayed flowers. The clone 'Diane' HCC/OSNSW has been used in this country as a stud plant, although it has not yet proved itself as a parent.

C. Rio Rita, registered by McBeans in 1937, and bred from *C. Pearl* (*Alexanderi* x *grandiflorum*) and *C. Ruby* (*giganteum* x ?) has a clone 'Radiant' which received FCC/RHS in 1939. It has attractive rose coloured flowers on a nice spike and is the progenitor of plants which have been used as studs in Australia, such as *C. Buxom*, *C. Vieux Rose* and *C. Fascination*. Seedlings from *C. Vieux Rose* 'Dell Park' are currently available and are worthy of attention if you seek reds or strong pinks.

EARLY FLOWERING

A break-through in early flowering was marked by the award of AM/RHS to *C. Early Bird* 'Pacific' in 1950. This was from the cross *C. Edward Marshall* (*Albatross* x *Doris*) and an outstanding form of the species *C. erythrostylum*, made by Sanders and registered in 1946. It is a tetraploid white. The flower is large and could be regarded as ungainly because the lateral sepals droop leaving a marked gap between them and the petals. The petals are a desirable roundness at the tip.

Its tetraploid vigour bred back to broad-segmented Balkis descendants could, hybrids conceived, make it possible to obtain well filled flowers, not only between the segments but below the labellum. There was the added incentive for Australian growers of obtaining high class early clones for the export market.

Seedlings descended from *C. Early Bird* and Balkis types are available and those two generations on with *C. Stanley Fouraker* (*Alexanderi* x *Early Bird*) as one parent are well worth a gamble.

C. Stanley Fouraker is *C. Early Bird* 'Pacific' crossed AWB, registered by Stewarts in 1958. Its clone 'White Magic' is a superb early white used by Stewarts as a major stud

plant. There is a clone 'Arcadia' with green flowers.

Good reds were few until recent years but Australia's Wondabah nursery achieved a major break-through with their wonderful *C. Sensation* cross, registered in 1961. This ninth generation cross was the result of a concentration of red genes, the parents and grandparents being strong pinks or muddy reds. The line is heavily influenced by *C. insigne*, which was used nine times; and by *C. l'ansonii*, used four times. Both have recessive red genes.

The *C. Sensation* clones 'Imperial', 'Aminya', 'Vieux Rose', and 'Janille' have all received Awards of Distinction from the Orchid Society of N.S.W. The clone 'Vieux Rose' seems to offer the best potential as a parent and many of its seedlings will show improved flower shape and spike habit while retaining the rich red of the *Sensation* parent.

THE "PURE COLOURS"

Another development in which Australia has led the world is "pure colour" cymbidium strains. These are plants without anthocyanin pigments. Such plants do not develop streaks on the flowers from exposure to sunlight. They last extremely well and are ideal for export. Fine showbench clones are emerging in the new "pure colour" crosses, including some tetraploids.

Besides the rash of currently available seedlings buyers can now obtain artificially induced tetraploids and inexpensive mericlone propagations of top award winners. In the next issue let us look at the current offerings and their potential.

The late Mrs. Sasso

All the orchid world joins in expressing sympathy to Mr. Lou Sasso and his daughter Laelia on the death of his wife after a long illness.

Mr. Sasso is renowned as a top grower of orchids and for the tremendous work he has put in as orchid society administrator. His work, for which the orchid world owes him an immense debt, could only have been possible through the smooth running of his domestic life. Although Mrs. Sasso kept unobtrusively in the background she made it possible for Lou to give so much time to the work of the Orchid Society of N.S.W. and several other orchid societies.

LATE MR. ALEX D. HAWKES

Mr. Alex Hawkes, author of the monumental *Encyclopaedia of Cultivated Orchids* died last year in Jamaica, where he had lived for the previous ten years. He was only 50 years old.

He was founder and first President of the South Florida Orchid Society. Mr. Hawkes was extremely versatile. As well as orchids he was an authority on palms, a gourmet cook, a reputable artist, and spoke six languages. He was a prolific writer for horticultural journals.

Yes, You Can Grow Orchids In Darwin

J. S. WOMERSLEY B.Sc.

Formerly Assistant Director (Botany), Department of Forests, Papua New Guinea

A dry season of almost eight months followed by an intense monsoon bringing high temperatures and humidity, low cloud and little sun with the ever present possibility of a cyclone does not read like optimum conditions prescribed for growing orchids. A little thought however suggests that some genera and species may in fact revel in these conditions. Do not *Phalaenopsis* and *Vanda* grow wild in the jungles of Malaysia and Indonesia, *Oncidium* and *Epidendrum* in regions of South America where extreme drought alternates with heavy rain, *Cattleya* from the jungles of Brazil, *Dendrobium*, particularly the section *Ceratobium* from the lowlands of Papua New Guinea where the plants grow high on exposed branches of coastal or rainforest trees to catch the cooling and drying winds which temper the high humidity and frequent rain.

My introduction to orchid growing in Darwin came in mid 1976 when I was able to take a collection of some 700 plants of *Vanda*, *Arachnis*, *Ascoglossum*, *Renanthera* and related genera to the Botanic Garden. These plants had been salvaged at the time of my retirement in December 1975 from my personal collection in Lae. The large collection passed through quarantine at the Adelaide Botanic Garden where a selection joined the plants already in cultivation under glass. My host and hostess for this occasion were Bill and Janet Raby who formerly lived in Sabah within sight of that mecca of botanists, Mount Kinabalu. For twelve years in Sabah, Janet had been growing orchids — after all if you live in the Malaysian lowlands it is easier to have a garden of orchids than the annual flowering plants with which we who live in temperate regions are accustomed.

During a reconnaissance visit to Darwin prior to her husband accepting an appointment with the Public Service Janet had been old quite firmly "Orchids won't grow in Darwin, so don't bother bringing any here". However, having liked what they saw Janet and Bill came to Darwin, complete with the determination to grow orchids. She found that among the residents there were a handful of like minded people including Rosemary Bromwich, Kevin Glasson, Eileen and Albert

Buhr, and Ralph Handcock, a grand old man of 84 years young. Each grower was doing their own thing with little opportunity for advice or discussion. Soon a group formed which affiliated with the Queensland Orchid Society, gaining the advice and help of other growers but over a distance of 3,000 kilometres. At this time the Darwin Botanic Garden, one of the older public gardens in Australia had done little to develop an orchid collection or provide an advisory service.

The problem of a long and severe dry season with day after day of cloudless skies and intense sunlight necessitated some sort of protection. Again each grower tried what they thought might work, palm frond covers, sarlon on wood or metal frames, plants under eaves or the breeze-ways of houses on stilts. Came Christmas morning, 1974 and cyclone Tracy. Darwin as a city faltered. The orchid growers found among the wreckage of their homes and gardens that the orchid collection too had "gone with the wind". Some of the growers, so story tells, were so keen that as dawn broke they were seen among the remnants of the house and garden salvaging orchid plants long before they turned to household effects.

Today, in Darwin, Cyclone Tracy is an unpleasant memory. Darwin has found its life and soul with the extensive reconstruction carried out by the Darwin Reconstruction Commission and particularly the indefatigable efforts of the Mayor, Dr. Ella Stack. During my visit in mid 1976 I found the growers of orchids still somewhat discouraged not only by the ravages of the cyclone and its aftermath but by some horrendous problems created by poor procedures used by the local quarantine authorities. The experience and advice from Janet Raby was starting to convince growers that they should be attempting to grow tropical orchids obtained from Singapore and Bangkok rather than plants from temperate Australia. In the gardens I then visited there were some fine collections with a wide diversity of genera, particularly in that of Kevin Glasson who had found himself a niche protected from the more damaging effects of the dry season winds. Rosemary Bromwich and Janet Raby had found that



One of the Darwin collections.

Photo: John Womersley

the local 'sand palm', *Livistona humilis*, provided a very suitable support for the terete and semi-terete *Vanda*. The sand palm grows in profusion adjacent to Darwin. During the course of land clearing for the post cyclone new suburbs countless thousands of these palms were destroyed. Using the sand palm posts collections of terete *Vanda* were established in several gardens. In Lae I had grown my vandaceous plants in drained beds of coconut husk fibre with horizontal wires for support. Coconuts in Darwin had almost disappeared as a consequence of the cyclone so there were no fruits locally available from which the husk could be obtained. In fact, I found that coconuts for planting were being brought overland from Cairns to be germinated for use in the rehabilitation of Darwin gardens.

For the *Vanda* and related orchids sand palm came to the rescue and soon long lines of the palms were wired to metal supports in the Botanic Garden. At the base a deep litter of leaves and compost provided the necessary shade for the non-aerial roots these plants develop. By mid-1977 permanent arrangements had been made at the botanic garden to house this collection. A new display house and surrounding area with suitable security fencing had been completed. This plant house has been named the Holtze Memorial Plant Display House. I was again invited to visit Darwin and open this fine addition to the Botanic Garden.

During this visit I was pleasantly surprised to find that there were a number of new orchid growers since my previous visit. Through the generosity of my hostess, Rosemary Bromwich, I was able to visit many of these growers and see their collections. Throughout, my general impression was

one of amazement at the development of the collections which had taken place. Plants salvaged after Tracy had largely recovered (or, I suppose, died) and were busy flowering or producing new side shoots. Terete and semi-terete *Vanda* on sand palm had developed well with excellent root growth encircling and penetrating the rough fibre of the supports. Cane *Dendrobium* in wooden baskets which had been back cut during the previous year now had new pseudobulbs approaching flowering size. Plant houses had been constructed of steel pipe, clamped or welded with chain wire as a support for the sarlon shade cloth; overhead sprinkler systems to maintain humidity had been installed; cultural materials for the potted and basketted plants had been improved using charcoal and buffalo manure so readily available in the nearby bushland. The response by the plants to this tender and loving care was impressive.

Most encouraging was the association of growers who, instead of being the rather isolated individuals I had met in 1976 now formed an ever widening group of people united in the common interest of growing tropical orchids. Come with me to meet some of them and see their collections.

Janet and Bill Raby are away overseas, Bill having retired earlier in the year. They will be returning to live in Darwin and to enjoy their delightful garden. As we enter the gate we pass through a fence covered in tall creepers and lined with a number of substantial trees providing a very effective wind break. The centre piece of the garden is the swimming pool. Clumps of sand palm posts with, at the base, a small heap of stones, charcoal and buffalo manure, have a large number of stems of *Vanda* Ruby Prince, *Vanda* Diana and other terete and semi-terete vandaeas. Most of these are in flowers — some over 2 metres tall. In one corner, surrounded by crotons and *Acalypha* are shorter posts with strap leaved and quarter terete vandaceous plants. Tan Chay Yan and other Josephine van Brero hybrids are producing a profusion of flower spikes. In a small shade house and under the eaves of the house are flowering *Phalaenopsis* with their beautiful spikes of pink and white flowers. It is an unforgettable experience to see *Phalaenopsis* hybrids growing freely out of doors, exceeded perhaps only by a sighting of wild *Phalaenopsis amabilis* flowering in the forests of Malaysia, Indonesia or Papua

New Guinea. Much of the success that Janet Raby has achieved in defiance of being told that you can't grow orchids in Darwin, comes from the balanced environment which has been built up in the garden with protection from wind, a pool to increase humidity, and regular watering.

We move now to visit the Reverend Lloyd Kent who has started from the simple by importing flasks of seedlings. His plants are growing at a greater rate than achieved with heated houses in cooler climates. Some of his first plantings are now at flowering size and he has hundreds of seedlings in different stages of development. Lloyd also has a large hedge of terete *Vanda* which somehow came through the cyclone. Together with several others, Lloyd is one of the newer growers who are experimenting extensively to find the optimum growing situation.

Our next call is to Albert and Eileen Buhr. Entry to their garden is barred in all directions by orchids — in beds, on trees, hanging in baskets, in pots, in flasks, in fact growing in every possible situation. There must be thousands of plants here from flasks and seedlings in community pots to massed displays of vandaceous plants, some exceeding two metres in height. The most outstanding attraction is a group of *Ceratobium Dendrobium*, including a magnificent *D. schulleri*. Albert and Eileen had obtained from the nearby bushland the fallen trunk of a eucalypt tree which had burnt through at the base and inside for most of its length. Using a chain saw Albert had cut a slice off one side to produce an open-ended canoe, some 35 cms wide and 3 metres in length. By selection or chance the log had a curve which raised the centre above the ends. Within this open-ended trough are massed dendrobes surrounded by charcoal and buffalo manure. Pseudo-bulbs of tremendous size and an abundance of flowering spikes testified to the health and nutrition of the plants.

Within shade houses there are *Cattleya* hybrids, perhaps not quite as floriferous as in temperate climates but producing a profusion of good blooms. *Phalaenopsis* are hanging in numbers, projecting their long and branched flowering spikes at eye level. We could stay all day and talk with Albert and Eileen. Incidentally Albert is the master of an inter-island barge that gets around the south-west Pacific. He has a number of interesting plants brought back from trips to



Lush vandaceous orchids predominate in this Darwin garden. — Photo: John Womersley

the Philippines and Papua New Guinea, but oh, the problems with plant quarantine when trying to import wild collected plants.

We must hurry to meet Ralph Handcock before he has his daily siesta — after all a man of his years is entitled to his midday rest. Formerly a resident of Sylvania, New South Wales where he had a nursery and grew orchids Ralph came north to Darwin to the warmth and friendliness of the tropics as a permanent resident in 1975. Ralph has a large collection and grows his plants without exposure to natural rainfall. The growing area is surrounded by concrete block walls and roofed with corrugated fibreglass — white translucent is the only colour to use according to Ralph. Concrete posts made with his own hands contain a wide diversity of plants. These are set out on benches which have been put together from a lot of the building materials which littered Darwin in the post-cyclone years. Even though his plants look dry he had certainly succeeded as we can see from the number in flower. Ralph has had a long history of association with orchid societies. His knowledge and opinions on judging are freely available to the organisers of orchid shows in Darwin. With the orchids are a number of the very colourful foliage plants and *Anthurium* with flamingo pink flowers.

We leave Ralph to his rest and return to Rosemary Bromwich. A swim, a drink then lunch is the order of the day.

Before we start our afternoon program let us have a look at Rosemary's garden. Their house was severely damaged during Tracy but while her husband was busy in his job as senior surgeon at the base hospital tending to the needs of those unfortunately injured, Rosemary had to save what she could of their

personal effects and the orchid collection. There are now several excellent shade houses with very strong roof supports and sprinkler watering systems. The prevailing winds are restrained with palm fronds and sarlon. In these houses are some fine plants of *Dendrobium* of the *Phalaenopsis* section, *Oncidium*, *Epidendrum*, many *Ceratobium* dendrobes and a wide variety of *Vanda*. Among the latter is a very interesting plant collected on the mountains in Timor during a visit Rosemary and her husband made to that island some years ago. Rosemary and Alan Bromwich have made several visits to Singapore and Bangkok. They always return with new plants.

Severe losses during quarantine have convinced Rosemary that it is preferable to bring in either flasks or small plants rather than large ones. I sense in the enthusiasm for her collection and interest in growing plants that it is Rosemary Bromwich who is the catalysing force which has brought the orchid growers of Darwin together. I was very pleased to find that she is the President of the Darwin Orchid Society, and in this role she takes us away from her garden to meet Gwen Heinemann, the Society's secretary. The Society meets on the first Monday of each month so if you are in Darwin about that time do give Rosemary a ring, and go to their meeting. We find Gwen at home where she has a collection of orchids including some very fine *Phalaenopsis* hybrids. While on this round we will call on Hazel Fewell in the new suburb of Casuarina. What there was in Casuarina on December 24th, 1974, was not there by dawn on December 25th. Tracy took everything with her. Today we find row after row of new houses, perhaps not all aesthetically pleasing but the rigid alignment is being subdued by garden development. Hazel has established her garden using a deep mulch of wood chip. Everywhere, including within the orchid houses there are several inches of wood chips helping to conserve moisture. The nucleus of the orchid collection was a single load of plants brought by car drawn trailer from Queensland. To augment these Hazel has been establishing seedlings from flasks. Surrounding the shade houses is a garden of foliage plants and young trees which will combine to provide the controlled environment in which the orchid plants will flourish.

We return now toward the city centre where Kevin Glasson will have returned home

from his office duties. Kevin is located in a concealed gully, protected by buildings and trees. His shade houses are built in tiers with substantial rock walls. The site is well sheltered and a favourable microclimate has been established. There are hundreds of plants, many in flower, of *Dendrobium*, *Cattleya*, *Vanda*, *Doritis*, *Phalaenopsis*, *Renanthera* and more. In the ground are a range of colour varieties of *Spathoglottis*. This is a genus which should do well in open situations particularly if some of the horticultural forms based on deciduous species such as *Spathoglottis portus-finchii* are introduced. Kevin will shortly be moving his collections to a new and larger site where he will be able to further expand his interests. We look forward to seeing these on a future visit to our northern city.

Before we return home we call at the Botanic Garden. This garden was started in the latter part of the 1800's when the present site was called Palmerston. Throughout the early years of the gardens emphasis was placed on the introduction of economic plants and little effort had been made before Tracy to develop an ornamental orchid collection. With the infusion of the collection from Lae and some plants obtained from other sources by the present Curator, Mr. George Brown, interest in orchid growing has been awakened. With the help of the Mayor, Dr. Ella Stack, every effort is being made to produce an orchid garden which could rival those in Singapore and Bangkok.

There is great interest in orchid growing in Darwin as evidenced by the sale of rather unsuitable plants of *Cattleya* back cuts which are being brought in from the southern states. Darwin is a tropical town. Good orchid planting material is best obtained from the north, particularly Singapore and Bangkok. Hopefully it will not be long before we can find locally grown cut flowers of orchids on sale in the florists shops instead of the currently imported flowers from Singapore. Certainly there are problems to be overcome in growing orchids in Darwin, but there is now abundant evidence not only in the gardens of those persons we have visited but among the many we have not, that, Yes, you can grow orchids in Darwin.

82 Richmond Road, Westbourne Park 5041
A THOUGHT ON CONSERVATION

"Orchids grow in association with other plants in what has been called ecological harmony which can be disrupted by natural transition and by man in the process of his living" — J. RENTOUL.

*Significant
cymbidiums
show to-day's
complex
breeding*



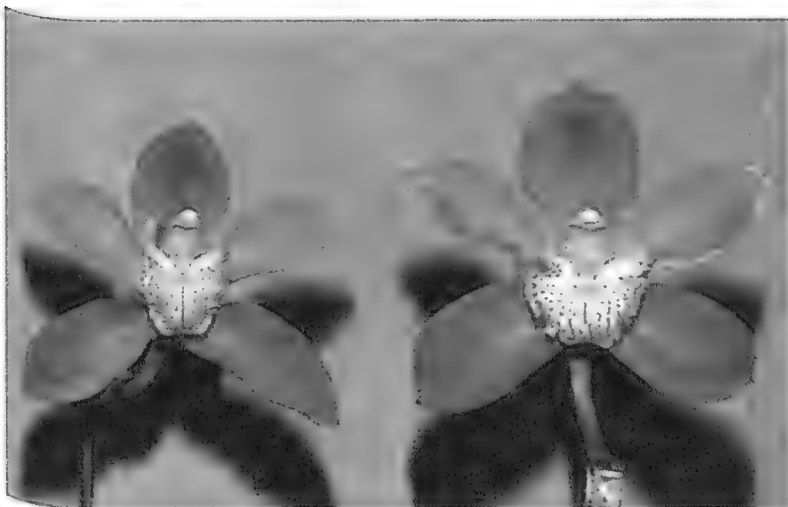
▲ C. Mem. Robert Casamajor 'Wanda'

This seedling was champion of the 1977 Tasmanian Orchid Society Spring Show. For complex breeding see article.

Photo: Barry Dudman

▶ C. Joyce Duncan 'Emerald'

Typical of the many fine clones from this grex. Many have been awarded. See article.



◀ C. Lunagrad 'Elanora'

A graphic demonstration of the power of ploidy. On left is the 2N flower, on the right a colchicine converted 4N. Refer to March issue. Also recommendation of International Orchid Commission in this issue.

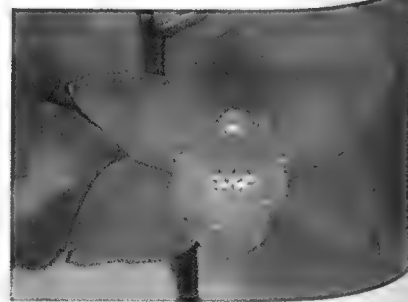
Two bottom photos: A. B. Porter

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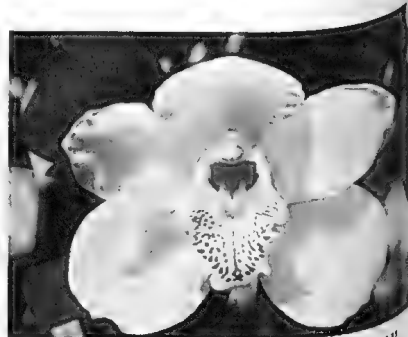
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| 7603 | SLEEPING LAMB 'GOLDEN TETRA' (4N) HCC/AOS x SUPREME DESTINY 'TETRA JADE' (4N). Tetra Jade is the earliest of all our tetraploid pure colour greens. Expect award quality yellows and greens on strong tall spikes. 100% P.C. 100% 4N | \$100 |
| 7609 | SLEEPING BEAUTY 'SWEET DREAM' (4N) x WYANGA 'ELANORA' AD/NSW (4N). See picture right. Expect very shapely greens on bountiful plants. 100% P.C. 100% 4N | \$100 |
| 7610 | SLEEPING GIANT 'LEMON TETRA' (4N) x SLEEPING LAMB 'GOLDEN TETRA' (4N) HCC/AOS. Expect mid-season golden yellows of award quality. 100% P.C. 100% 4N | \$100 |
| 7618 | SLEEPING GIANT 'TETRA KING' (4N) x SLEEPING GIANT 'LATE SEPTEMBER' (4N). We expect free flowering, very late greens and yellows of very heavy substance. 100% P.C. 100% 4N | \$100 |



WYANGA 'ELANORA' (4N)

WHITE SEEDLINGS

- | | | |
|------|---|------|
| 7619 | PALACE COURT 'SNOW WHITE' x MARY ANN 'SWAN SWAY'. The earliest of the quality Mary Anns with our June flowering award quality Palace Court. Expect the best quality early whites. 100% 4N | \$50 |
| 7645 | MIRETTA 'MEM. A. A. McBEAN' FCC/RHS (4N) x MARY ANN 'SIMPLICITY' AM/AOS. A remake of the very successful Highland Mist cross; this time using two tetraploids as parents. 100% 4N | \$80 |
| 7649 | PEARL BALKIS 'VALLEY HIGH' AM/NSW x VALYA CRAIG 'JUDY' (4N). Both parents are pictured on this page. We expect late flowering, large award shape flowers on tall, upright spikes. 100% 4N | \$80 |



PEARL BALKIS 'VALLEY HIGH' AM/NSW

YELLOW SEEDLINGS

- | | | |
|------|---|------|
| 7623 | LUNAGRAD 'ELANORA' (4N) HCC/AOS, EA/NSW x ANGELICA ADVENT (4N) AM/RHS. Expect early flowering greens and yellows of award quality. 100% 4N | \$80 |
| 7624 | BUD MARCH 'ROSETTA' x ANGELICA ADVENT (4N) AM/RHS. Expect many intense yellow flowers on long upright spikes in July and August. 100% 4N | \$80 |
| 7625 | BUD MARCH 'ROSETTA' x LUNAGRAD 'ELANORA' (4N) HCC/AOS, EA/NSW. Early free-flowering yellows and greens on tall, strong, upright spikes. Multi-flowered. 100% 4N | \$80 |
| 7635 | VALYA CRAIG 'JUDY' (4N) x ANGELICA ADVENT (4N) AM/RHS. V.C. 'Judy' is the only known tetraploid and one of the best of this famous grex. Expect vivid yellows on upright spikes. Bountiful. 100% 4N | \$80 |



VALYA CRAIG 'JUDY' (4N)

GREEN SEEDLINGS

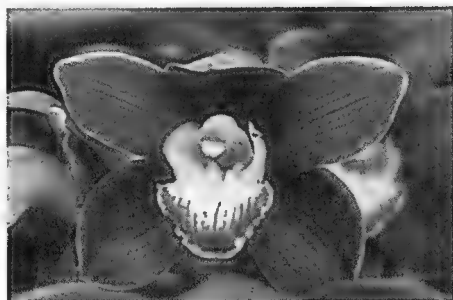
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| 7621 | LUNAGRAD 'ELANORA' (4N) HCC/AOS, EA/NSW x ZUMMA BOYD 'TETRA HIGH' (4N) AM/AOS. Expect multi-flowered dark greens from bountiful plants. Strong spikes of large flowers. 100% 4N | \$100 |
| 7632 | ZUMMA BOYD 'YOWIE BAY' (4N) AM/AOS x BALTIC AM (4N) B/CSA. Expect high yield plants producing strong spikes of bright green mid-season award quality flowers. 100% 4N | \$80 |
| 7634 | MIRETTA 'MEM. A. A. McBEAN' FCC/RHS (4N) x ZUMMA BOYD 'TETRA HIGH' (4N) AM/RHS. Expect mid-season high award quality greens. 100% 4N | \$100 |

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- 041+C VOLCANO 'MENEHUNE' AD/SA x SENSATION MELITA HCC/AOS. Pictured right. Expect superb, shapely, intense browns. Colchicine treated \$80
- 044+C VOODOO 'GYPSY RED' x KYBER PASS 'ROWE'S RED' HCC/AOS. A remake of Tapestry using superior parents. Voodoo is a tall, spiked, vivid, ruby red. Kyber Pass is a stunning wine-red with tall spikes and well-arranged blooms. Colchicine treated \$80
- 054+C KYBER PASS 'RED SPLENDENS' x NGAIRE 'KURINGAI'. Expect shapely reds with heavily barred lips on long spikes. Colchicine treated \$60



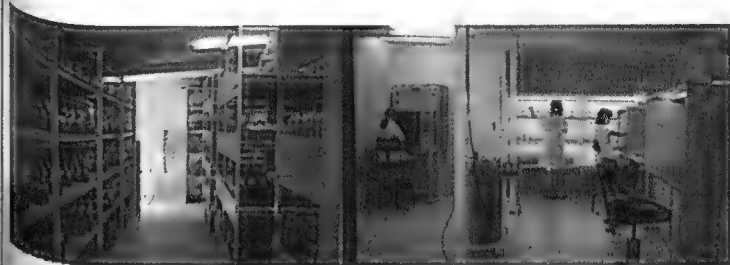
VOLCANO 'MENEHUNE' AD/SA

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- 060+C SARAH JEAN 'SPARKLE' x WYANGA 'ELANORA' AD/NSW. Expect mid-season quality greens. 50% P.C. Colchicine treated \$60
- 062+C SLEEPING BEAUTY 'SARAH JEAN' x PUMILUM ALBUM var. HARKUUM. By request, a remake of the famous Sarah Jean miniatures. Colchicine treated \$60

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Initial finance, which will mainly be devoted to printing the Proceedings, has been provided by the Australian Orchid Foundation, as part of its policy of furthering the interests of orchid growers.

Individual registrants should forward payment by the 26th July: \$6.00 if not staying to dinner, \$11.50 including dinner.

Societies should send a list of members participating with a cheque covering the total number.

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Interstate and overseas participants are very welcome, and membership of an orchid society is not necessary.

"A.O.R." ARTICLE ATTRACTS WORLD INTEREST

Our December 1977 issue article on "Leaf Phenolic Acids as Chemical markers for Cymbidium Floral Albinoism" has attracted interest from scientists overseas. This breakthrough in forecasting floral characteristics of young seedlings was the result of research by Mr. Peter Smith, assisted by M/s Nancy Paton, of the C.S.R. scientific staff.

Now Dr. Christine Williams, possibly the world's leading authority on the chemotaxonomy of orchids, wishes to carry the research further. For this purpose she requires samples of leaves and flowers from genuine cymbidium albinos. About two leaves and two flowers from a clone would be sufficient.

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In Search of Cymbidium Optimums

ALVIN BRYANT

Part I

One axiom in plant culture would be that all plant culture is dependent upon the systems a plant has evolved for its growth.

Plant growth has been well researched and the results implemented in cultural practice. We are reassured in the correctness of present day techniques for we are told that a well grown plant is a healthy plant. Should pathogen attack occur we are further comforted by the huge array of insecticides and fungicides available to choose from to keep the plant healthy.

There is however a difference between a well grown plant and a plant that is growing well and a plant that is kept healthy and one which is helped to keep itself healthy. This is not just a play upon words.

An axiom which seems to be missing in the literature on horticulture is that all plant culture is dependent upon the systems a plant has evolved to keep itself healthy. By contrast, plant health systems are not well researched. Unfortunately the deferment of their cultural implications through lack of knowledge has resulted in this axiom appearing to have been forgotten instead of being the basis for regular review as more knowledge comes to hand. As a result our test and research results come to conclusions which may be invalid.

When the inorganic grower states that a well grown plant is a healthy plant he has assumed that his plants which are growing well, are well grown. This could only be correct if his cultural technique ensured the plants' health systems were fully operational also. I will be delighted if you can find just one case where inorganic research workers have provided for the cultural requirements of the plants' health systems before they reached their conclusions.

The difference between keeping a plant healthy and helping a plant to keep itself healthy is obvious. It is the difference between what culture is today and what it should be. There is no research work to my knowledge which makes sure a new fungicide is harmonious with a plant's health systems. I am sure that many of today's fungicides would be unnecessary if the plant health

EDITORIAL NOTE

OF IMPORTANCE

Mr. Alvin Bryant is well known as one of the world's leading cymbidium hybridists. Thus there is weight behind his statement that this article is "the most important thing I have ever done".

It stems from long years of practical cymbidium growing experience, backed by his scientific knowledge as a graduate academic, and his keen observation.

The experienced cymbidium grower will appreciate its hypotheses; the horticultural scientist will have need to ponder its message; and the beginner who may not now understand it should read it again after another year — or two years — experience in growing.

Although mainly concerned with cymbidiums there are principles enunciated here which apply to other genera.

The need for research to check these hypotheses is readily apparent since all are capable of being tested scientifically.

This article is written for cymbidium growers and scientific terms have been kept to a minimum. Also it is not in scientific format.

systems were understood and allowed to operate.

Organic growers fare little better. They claim their plants are healthier and what follows supports this. However, their case for plant health rests on pathogen control by means of micro-organic balance. The complexity of micro-organic balance is a major deterrent to verification even today. Once again it is not the plant's own health systems which are being considered.

Until recently I had never considered plants' health systems. They were never mentioned and I never questioned traditional thinking. It was simply a matter that there were still cultural problems which were unexplained. Fortunately contemplation of an apparently unrelated matter first caused me to question traditional thinking and then led me far enough into plant health systems for me to recognise what was happening and follow it through.

I am certain beyond any doubt that plant health systems do exist. Not only do they exist within the plant but the plant uses them to modify its immediate environment. Further, they require certain cultural conditions to make them effective and they are chemical in nature.

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In order that you can judge for yourself the logic is presented as I unfolded it.

Some twelve months ago I attended a seminar at the Department of Agriculture, Rydalmere, where one of the topics covered was the making of usable compost in three weeks by wetting and mixing in urea. It was stated that the mix had to be leached thoroughly because **nitrogen displaced the toxic wastes** and they could now be removed. For a long time I contemplated just how nitrogen would displace toxic wastes and eventually decided there was a chemical combination between the nitrogen and the cellulose material because heat was generated. Until this time I had never questioned the conventional explanation on nitrogen loss in sawdust mulching. Here, micro-organisms were supposed to multiply so rapidly they used all available nitrogen until they reached a balance. With compost heaps they were supposed to be killed off by the heat and nitrogen was not released until they returned once the heap cooled. The chemical concept won and I decided these explanations were incorrect at least as far as the first few weeks of composting went. In these initial stages while nitrogen loss was occurring it was the result of nitrogen combining chemically with the wood cellulose material.

Some time later I idly reflected on the toxic wastes. They would have to be of natural origin or there would be no guarantee that nitrogen would displace them. They would also only be toxic because they were concentrated otherwise plants would poison themselves with their own vegetation. The plants would, in their natural state take some of them up again for nature is usually not wasteful. It then occurred to me that pathogen control by micro-organic balance might also be suspect as in the case of the nitrogen loss in the initial stages of the compost heap. If this was the case then the plant could be controlling its immediate environment by means of the so-called toxic wastes being continually released from the fallen vegetation. These wastes at certain strengths could control pathogens yet be harmless to the plants. Cultural practices which do not provide a substitute when humus is removed from the immediate plant environment could then be dangerous.

It was only a short step in the thinking then to reason that if plants took up pathogen control substances as well as manufactured them then plants growing for countless

ages in rich humus might have lost some of their ability to manufacture these substances and therefore a continual addition of relatively fresh humus was essential. The *Cymbidium* is a perfect example for it grows at the edge of a forest (not all species) in the top eight inches of humus.

It is also possible that certain plants may have to grow in the proximity of unrelated plants to gain the benefit of their health substances.

If this thinking is correct then there is a clear case for adding health substances of this nature into cultural watering systems and this is of world significance. On a lesser note this could well supply one of the missing health factors which has made it impossible for cymbidium growers to resolve the contradictions which have always existed. The organic fraction in the compost plus the regular addition of humus may well be vital. There are two points which should be considered, (a) different timbers will release different quantities of different substances not all of which might be adequate or beneficial and (b) other cultural practices such as improper fertilising could upset what must be a fine balance.

About this time at the nursery we ran out of our lightly composted shavings and potted a group of plants in raw shavings with some poultry manure. To minimise possible damage to the plants they were leached heavily every few days to remove as quickly as possible the so-called toxic wastes. These wastes poured onto the polythene weed protector which had become covered with slimes. There was no visible damage to the slimes until one day we turned the water off to let the polythene ground cover dry and swept the slimes away. Normally slimes appeared overnight once the watering recommenced. This time they didn't. The ground at the edges of the cover where the wastes had drained quickly became covered in myriads of tiny weed seedlings glowing with health. Here was positive evidence that plants control things which are detrimental to them.

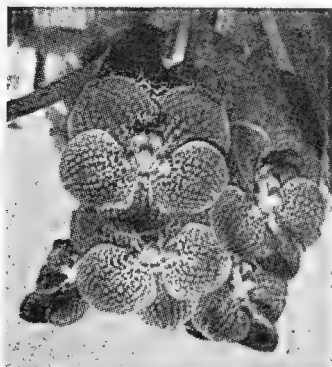
Once it was realised what was happening the answer to the way slimes occurred around the nursery was solved. Wherever the ground had been subjected to quantities of fresh shavings, no slimes were present.

The discovery of this is of great significance and it is immediately applicable.

The thinking for this can be carried further. Forest pools are clear, swamps have clear

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water. New fish ponds often go green until the water plants settle in. If control substances do originate from the plants then (a) the plants control their manufacture of these substances or toxic build-up would occur or, (b) the control substances are broken down at a regular rate. Of these two possibilities the former is the most likely as heavy plant growth would mean toxic water in the second case.

I had been searching through my mind for any tiny piece of evidence and eventually collected a meagre number of fragments supporting the existence of plant health systems. One of these was an observation that phalaenopsis seedlings in the flask release a black substance into the media. This substance was harmful to the smaller plants in the flask. Now phalaenopsis grow on trees and it seemed to suggest that this type of plant might have developed the ability to release substances into the bark so it would not decay and fall off taking the plant with it. From memory I thought Morel had noted that this black exudation was a phenol oxidase. This had to be checked. Before I had time to do this a friend walked into the nursery with a new book he had just purchased so we looked up the section on phalaenopsis tissue culture to see if it was mentioned. We didn't find confirmation on Morel but in this book, the 1977 edition of *Orchid Biology* by Joseph Arditti, p. 255, was a mention that phalaenopsis tissue in the flask was often killed by the products of its own phenolic compounds "... these become oxidised on the cut surfaces and the oxidation products are toxic".

The significance of this was immediately apparent. This was how the plant's health system worked. This is the immediate hypothesis which can be formulated: **If plant cells are damaged by pathogens and air is present, the phenolic compounds in these cells form products toxic to the pathogens.**

Now cymbidiums have phenolic compounds and this process may be the same so the logic is worth extending.

This could explain why rot within a cymbidium or phalaenopsis will continue unless excised. There is no air present so there is no toxicity within the plant to deal with it.

If cymbidium rot is mechanically excised and the cut surface is allowed to dry, compost can be placed over the surface but it will not begin to rot again even though the pathogens must still be in the vicinity. The phenolic compounds in coming into contact with the

air have formed toxic products and so formed a barrier.

Now pathogen attack would occur in two circumstances. The first when the plant surface is dry and the second when the plant surface is wet. If the plant surface is dry when the attack would cause the formation of toxic compounds to deal with it. If the surface is wet the oxidation process may not occur and the success of the attack would depend on the length of time before the surface dried again for if it had time to penetrate deeply enough the toxic oxidation would occur behind it. The deeper tissues now affected would not be exposed to air and so fail to have their phenolic compounds form the toxic products. If it had not penetrated deeply enough the toxic oxidation would occur once the surface dried again and the pathogen would be dealt with. The possibility that wet surfaces could dilute any toxicity which might occur even if the surface was wet may be an alternative explanation.

Cultural practice at present advocates that plants should have good air movement and be well spaced because of light and carbon dioxide requirements. Now an additional reason for this becomes apparent. The plant's surface must be able to dry within a reasonable time to minimise the effect of pathogen attack. This leads to a new cultural requirement which must be consciously observed also, namely that a plant should only be watered again after its surfaces have been allowed to dry.

It is evident that this system also continues into the plant's immediate environment by means of the falling vegetation as theorised earlier. The compounds would, as the vegetation broke down, be released into the soil to deal with the pathogens. If one is to have faith in natural processes then it would be expected that beneficial micro-organisms would have a higher tolerance to these now oxidised phenolic compounds.

There are too many possibilities with the root system to try and be specific without research, for root tips should never be allowed to dry. Perhaps aeration of the root system is essential for both respiration and oxidation of phenolic compounds which may actually be exuded as in the case of the phalaenopsis. Perhaps the plant takes up the phenolic compounds and concentrates them in the root system. Perhaps it is necessary for sufficient oxidised substance to be present in the soil wherever the root system may be. Pathogens

may not be effective out of light and out of living tissue. Any one or all may be interacting together. The main thought I have here is that the level of moisture may be quite critical as it controls aeration and dilution factors.

There is one further thought. If a plant does recycle some of its pathogen control substances which have become toxic by being in contact with air, it may be tolerant to the low level involved whereas pathogens may not. Observation shows that they suspend plant and slime growth rather than kill. If then, the plant did take up too much it would only slow it down. This low level of toxic material might either be detoxified and recycled, left as it is and recycled to give a low level of protection within the plant or it may be concentrated at strategic points within the plant to form protective barriers should a pathogen gain entry. The protective barrier is suggested by the fact that a new growth on a cymbidium may rot but it is rare for this to continue on and destroy the plant.

Now what can we expect from all this?

Trial and error and shrewd observation by experienced culturalists over long periods of time would lead me to expect that cultural practice today would closely parallel what would be predicted by the hypotheses inherent in this article. This is what has happened.

It is now possible to be more selective in our choice of cultural alternatives for we now know why we are doing what we are doing.

The matter of slime control is an immediate gain and the need to let a plant's surface dry between waterings will become a cultural maxim.

The hypotheses which can be extracted from this paper are ones which can be tested.

The organic grower has won his case about plant health but now the inorganic growers knows what to do to add to his programme and a bridge exists between the two positions.

World culture will change to monitor and adjust the plants' health substance in the soils.

Many fungicides will become unnecessary as each plant's health systems are better understood and cultural programmes are adjusted to take account of this.

In time text books will reflect the truth or otherwise of what is presented here.

Meanwhile, cymbidium growers can add this thinking to their present cultural knowledge for it resolves many existing contradictions. What is presented is of immediate

practical value for it is good cultural practice to have an organic content, regular topping, good spacing and air movement and now, more significantly, the allowing of a plant's surface to dry between waterings.

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Enjoyment and interest will be keynotes of the Fourth N.S.W. Regional Conference.

Host Society is The Blue Mountains and District Orchid Society, and the Conference is to be held at Katoomba over the October holiday week-end.

The Conference opens on the evening of Friday, 29th September and closes on Monday, 2nd October.

Papers will be of a general and technical nature. They include Dr. R. A. de Fozzard, of New England University, on "Tissue culture"; Dr. J. Cocker, of Melbourne, on "Viruses"; Mr. F. Hampshire, of Ciba-Geigy, on "Pest control"; Mr. W. Upton on "Species around the World"; Mr. M. Corrigan on "Australian natives", and others.

Special social activities will ensure no dull moments, and interesting visits to beauty spots have been arranged.

Conference costs have been kept low relative to high quality. The Cocktail party on Friday night costs \$4.00; Saturday Conference sessions and lunch cost \$8.00; Dinner Dance and Prize giving \$8.00; Bus tour and barbecue on Sunday \$10.00.

Accommodation can be arranged for you at a motel or camp site. State accommodation required when contacting the organisers.

Bookings and money should be sent to:—

Mr. D. R. Wallace, 90 Great Western Highway, Blaxland, N.S.W. Tel. (047) 39 2091.

SHOW NEWS FROM BUNDABERG O.S.

The Bundaberg Orchid Society held a very successful Autumn Show at the show-rooms of Holden City. The attendance must have been an all-time record.

The mauve dendrobiums dominated the show. The Champion of the Show was *Rhynchovanda* Wong Yok Sun exhibited by Mr. B. Pearce.

The Society has made tentative plans to hold Spring Shows on 29th/30th September in conjunction with the quarterly meeting of the Sub-Tropical Orchid Council. It should be a big show with all our affiliated societies participating, and we intend to invite Emerald, Rockhampton and Gladstone. A dinner will be held on the Saturday night. It will be Sugar Festival time in Bundaberg. Everybody is welcome and enquiries should be made to Mrs. N. Maughan, M.S.108, Seaview Road, Bundaberg 4670.

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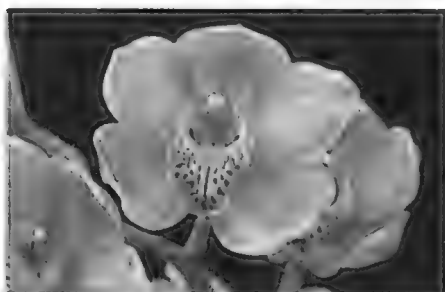
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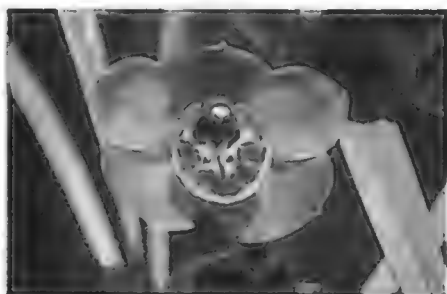
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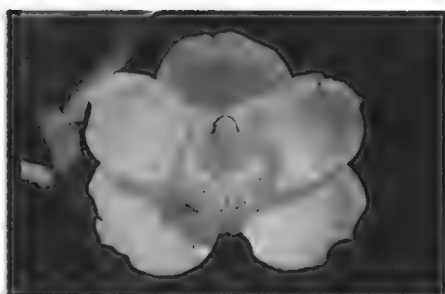
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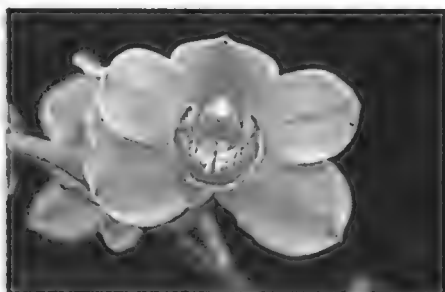
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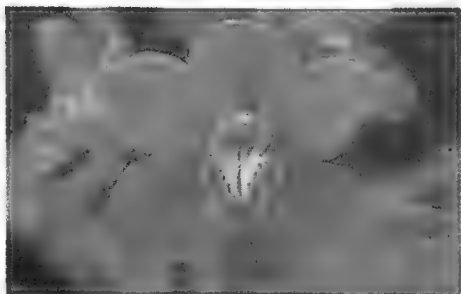
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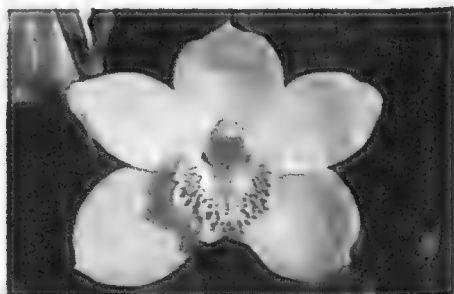
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ORCHID PERSONALITY

Barry Dudman and Family are Orchid Happy

To Mr. Barry Dudman and family orchids are a whole way of life.

Barry has a wonderful one acre block at Somerset, not far from Burnie and Latrobe, on the north-west coast of Tasmania. Here warm Bass Strait currents ensure a more equitable climate than the rest of Tasmania. Barry is famous for the way he grows cymbidiums and native orchids. He has many other genera too, also house plants and ferns and a fine kitchen garden.

Not quite the world, but certainly Australia, has beaten a path to his door for few mainland growers visit Tasmania without calling on Barry and his wife Wanda. And if the world has not come to Barry then Barry has gone to the world by contributing to overseas journals and by assisting Dr. Warren P. Stoutamire of the U.S.A. in his study of the pollination of Australian terrestrial orchids. Barry collected plants for Dr. Stoutamire and the doctor made two trips to Tasmania just to have Barry show him the orchid habitats.

Nowadays, at frequent week-ends local novice growers are invited to the Dudman growing houses to learn how to re-pot orchids and cultivate them successfully.

The friendships so formed leaven the whole life for the Dudmans and their four daughters. But the horticultural aspect of orchids is only one aspect of family enjoyment for they have developed a way of life deeply rooted in the fundamentals of Nature.

Back in 1952 Barry was only eleven years old when he became fascinated with the terrestrial orchids which grow profusely in the Australian bush. His attempts to grow them led him to join the Burnie Field Naturalists' Club as a junior member. In his teens he was strongly influenced by — and collected for — the late Mr. John Firth who was then compiling data for his book *The Orchids of Tasmania*.

Then in 1960 he was given some cymbidium plants. They weren't large nor in good shape and some patient loving care was needed to bring them to flowering state. The experience proved an apprenticeship to bigger things.

Barry looked for other enthusiasts with whom to share the excitements of growing

Foreword...

I met Barry in Tasmania some years ago when he was still honorary secretary of the Orchid Society of North-West Tasmania. He had then only recently taken over his one acre block at Somerset but the orchids and the kitchen garden were doing well. From time to time we have exchanged letters, and I have seen his many successes as an exhibitor recorded in society bulletins. Over the years a picture of a happy man with a happy family has emerged. This story shows that orchids can be more than a mere hobby — rather a means to a full and happy life.

RONALD KERR

orchids. He found a few orchid growers but no orchid society.

So in 1962, with Mr. Jim McQueen as co-sponsor, he formed *The Orchid Society of North-West Tasmania*. He was elected secretary and held that position for ten years.

In 1964 he became Newsletter Editor as well and produced issues of consistently high calibre which made the name of the Orchid Society of North-West Tasmania well known throughout Australia.

BACK TO NATURE

During ten years as honorary secretary, Barry, now married and with a growing family, maintained his love of the Tasmanian bush. Family field days to beautiful wilderness areas took place whenever his work with the P.M.G. and home garden allowed.

Eventually — about 1970 — the call of wild places lured him back to the Burnie Field Naturalists' Club.

Feeling it was time for others to carry on Barry relinquished secretaryship of the orchid society in 1972, and devoted most of his efforts to the Burnie Field Naturalists' Club. He was elected President in 1973 and, after five years, still holds that post.

The field naturalists hold monthly meetings and also bush excursions and camps. Naturally Wanda and the four daughters are eager participants in all these activities.

ORCHID RECORDING

Since that first fascination at the age of eleven the love of native orchids had become deeply ingrained and with the naturalists' club he reverted to their serious study. He realised the importance of Tasmania's orchid ecology and also the wider lessons that might be learnt

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Mr. Barry Dudman arranging a display of wildflowers for the Field Naturalists' Club.

Photo: Burnie Advocate

from an examination of such a self-contained area. Little had been done since the tragic death of John Firth.

Discussing his work with naturalists Ken Harris of Hobart and Peter Tonelly of Latrobe led the three to agree that team work on planned lines was necessary. They commenced a field recording of all Tasmanian orchids as a long term project.

Recording of each find covers date, location, type of country, distribution, recorder's name and remarks. Each of the three naturalists maintains a gridded map for each species and the recordings are marked in the appropriate grid.

Barry and Peter send their recordings to Ken Harris who brings all three species maps up to date. The scheme has caught the imagination of others and now members of all five naturalists' clubs in Tasmania are contributing.

Gradually orchid distribution patterns are becoming known and defined, and the habits and characteristics of each species are becoming better known.

This is a service which will ultimately be of value to the community and be a reliable guide to conservationists. The National Park and Wild Life Service is so interested that they have offered to ultimately feed this orchid data into their computer.

Barry has found — and his family too — that giving something of value to others has its own reward.

The recording of orchids has ensured that they go more often into the countryside and spend many enjoyable days bushwalking in remote, rugged and superbly beautiful areas of the island State. Occasionally there is the ecstasy of a new finding for an area.

These excursions, help for beginners at week-ends, and the welcome given to mainland visitors, plus the ability to grow orchids well, Barry Dudman and his wife have found to be the recipe for a full and enjoyable family life.

Next issue

More on cymbidiums. Also a further article on "Starting with Orchids".

Dates for your calendar

Hawkesbury Orchid Workshop: Saturday 26th August, 1978.

Fourth N.S.W. Regional Orchid Conference. Katoomba, 29th Sept. to 2nd Oct., 1978. Host society: Blue Mountains and District Orchid Society.

Fifth European Orchid Congress. Zurich, Switzerland. March 22nd to March 24th, 1979. Contact Secretary: Miss Dora Gerhard, CH-6082 Hohfluh (Hasilberg), Switzerland.

Sixth Australia Orchid Conference. Hobart, Tasmania. 1st to 7th October, 1979.

First New Zealand Orchid Conference. Auckland, October 1980.

Tenth World Orchid Conference. Durban, South Africa. 15th to 21st September, 1981.

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AUSTRALIAN ORCHID FOUNDATION

Where The Foundation Money Goes

Current and projected activities of the Australian Orchid Foundation show dramatically the practical manner in which it is fulfilling its function of *Action to benefit orchid species*.

This year the Foundation is spending \$3,550 to promote orchid knowledge and research, and to further conservation.

A grant has been made to Professor Warren Stoutamire towards his expenses during a study of the pollination of certain West Australian terrestrials. Dr. Stoutamire of the U.S.A. is internationally known for his work over many years on terrestrial orchids, particularly on techniques required for raising them from seed.

Canberra Botanic Gardens has also been doing advanced research on raising terrestrials. To enable the scientists there to experiment with tissue culture on terrestrial tubers the Foundation has paid for an agitating table which is now in use.

In the last issue of "A.O.R." it was described how the Foundation backs self help with cash when a grant was made to the W.A. Native Orchid and Conservation Group to pay for the materials used in constructing a fence around the "lost orchid" *Caladenia cristata*. It had been rediscovered after 54 years.

A substantial grant has been made to enable the complete revision of *Orchids of the West* by Rica Erickson. All name changes and new discoveries will be incorporated in a third edition of this very readable book.

Mr. Peter Tonelly has been given a grant to enable him to make a detailed study of orchids in the isolated north-west of Tasmania, including the islands of the Hunter group.

Last year "A.O.R." reported the Australian Orchid Foundation Expedition to the Iron Range. A further expedition, in conjunction with the Queensland National Parks and Wildlife Service, is being arranged to examine the orchids of the McIlwraith Range. This region is part of a projected National Park. The Foundation is contributing \$1,500.

ORCHID WORKSHOP

The first major project of direct benefit to horticultural orchid growers will be an *Encouragement and Educational Workshop*

on Orchids to be held at the Hawkesbury Agricultural College on Saturday, 26th August. This is co-sponsored by the Orchid Society of N.S.W. Theme of the "Workshop" is *How to obtain optimum flowering*. See elsewhere in this issue for details.

The above is where the money goes and you will agree that over the years the cumulative effect of such projects will benefit everyone.

WHERE THE MONEY COMES FROM

If money is spent it must come from somewhere. With the Foundation it comes from income from investments.

Every dollar donated goes to a capital fund and only the interest is used. Thus a donation of \$20 means that the Foundation has about \$2 a year to spend for evermore, assuming about 10 per cent interest on the \$20 invested.

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or 87 Turton St., Sunnybank, Q'ld. 4109.

SIXTH TASMANIAN REGIONAL CONFERENCE

To be held at Hellyer College, Mooreville Rd., Burnie, on Saturday 14th, October and Sunday 15th. Excellent programme of lectures and social activities. Dinner on Saturday.

Inspection of local collections on Sunday. These conferences have been very well organised in the past. For details contact any of the Tasmanian societies mentioned in the show information section.

NAMBOUR ORCHID DISPLAY

The annual Autumn Orchid Display by the members of the North Coast Orchid Society, Nambour, was held in the foyer of the Civic Hall, Nambour on Friday and Saturday, April 28th and 29th.

As in previous years, this mini show was a goodwill gesture by members, staged with the particular object of showing the native orchid, usually called the "Cooktown orchid", Queensland's floral emblem.

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NOMENCLATURE OF MUTATED CULTIVARS

(An extract from the Proceedings of the International Orchid Commission)

Among much other business conducted at its Sixth Plenary Session in Bangkok in January 1978, the International Orchid Commission discussed at considerable length the question of nomenclature and other principles relating to the results of mutation of plantlets derived by meristem proliferation from a named (and possibly awarded) cultivar, especially in regard to induced "tetraploidisation" by chemical treatment. "Tetraploidisation" refers to that form of induced mutation in which a tetraploid is vegetatively produced from a non-tetraploid parent cultivar.

As a result of the discussions four points were resolved by the Commission, which it was agreed be given as wide publicity as possible in the world's orchid press at the earliest opportunity. To this end this extract has been distributed to a number of major orchid journals. Those to whom it has not been distributed are invited to copy.

Extract from the Proceedings of the International Orchid Commission meeting in Bangkok, Thailand in January, 1978.

"After the Chairman had summarised the discussions the following points were resolved:

- (i) That in no circumstances should any indication or symbol of ploidy (such as 4N) be added to the name of any cultivar until its ploidy had been proved by actual chromosome count.
- (ii) That, as per ICNCP (1969) Art. 11 and Handbook on Orchid Nomenclature and Registration (1976) Part II, Rule 9, vegetative progeny permanently distinct from the parent cultivar and from each other, for ANY REASON (e.g. whether the result of deliberately or accidentally induced mutation through chemical or irradiation treatment, or whether the result of naturally occurring mutation) should be treated as new cultivars of the grex or species concerned, and as such each should receive its own distinct cultivar epithet. Awards to the parent cultivar would not carry forward to such mutated progeny and each new cultivar so derived should be judged on its own merits.

- (iii) That in the next edition of the Handbook, the provisions of Rule 9 requiring three consecutive bloomings consistently distinct from the parent cultivar to establish "permanent distinctness" be modified to allow such permanent distinctness to be alternatively corroborated by a checked and documented chromosome count which differed from that of the parent cultivar likewise checked and documented.

- (iv) That decisions as to whether a cultivar epithet applied to a mutated cultivar should show its relationship to the parent cultivar and — if so — the way in which the epithet was formed to indicate such relationship, was a matter for individual growers, subject always to the provision that such cultivar epithets be formed so as to fall within the rules of admissibility already prescribed by the Handbook (as taken from ICNCP.). Similarly as regards the way in which growers might indicate that unflowered plantlets ex-meristem proliferation had been subjected to treatments which might induce mutation. The diversity of possible treatments was such that no specific guidelines could be prescribed by IOC, and it was a matter for each grower to add such explanatory data in his catalogues etc., as he deemed proper — such data not forming part of the actual name of the plant".

CENTRAL QUEENSLAND ORCHID COUNCIL

Judging classes will be conducted in Emerald on the 22nd and 23rd July. You do not have to desire to be a judge to attend because the information on judging is of great help to any grower.

Growers in the Central coastal area of Queensland should contact the secretary of their society for details.

NEW MELBOURNE SOCIETY

The Maroondah Orchid Society firmly established itself on Friday 21st April last. The Society will meet on the third Friday in each month at the Vermont High School Hall, Morack Road, Vermont.

At the initial meeting, Dr. Julian Croker gave a talk on "Orchids around the world", illustrated with slides.

Maroondah honorary secretary is Mr. Jack Buchanan and he may be contacted by phoning 870 5201.

Congratulations and good luck Maroondah.

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CABOOLTURE O.S. AUTUMN SHOW

Caboolture Orchid Society is one of the more recently formed societies, a distance of some 30 miles from Brisbane. The members are very keen to present their efforts of orchid growing to the residents of Caboolture and surrounding areas, and staged their Autumn Orchid Show in the R.S.L. Hall on Saturday 15th April.

The richly coloured gold *Cattleya* Bouton D'or was selected Champion Orchid of the Show — two blooms of good substance, featuring a rich maroon shaded labellum — owner Mr. and Mrs. K. Scaife.

Reserve Champion went to *Onc.* Nona x Harry Jensen — two sprays of bright yellow coloured flowers — noticeable was the large skirt of the flower. This plant was tabled amongst some good quality orchids, particularly dendrobiums, by Mr. Alf Smith who had arranged an individual display of mixed genera.

The society's Spring Show will be held in the same venue on Friday, 25th and Saturday 26th August.

EASTERN DISTRICTS ORCHID SOCIETY

One of the most pleasing aspects of this Autumn Show is that whilst a mass display of flowering orchids and foliage plants always greets one at the entrance, the designer of the display somehow happens to have the knack of setting this at an angle, and low enough, that it does not distract from immediate viewing of the whole range of orchids on display.

Many fine orchids were tabled competitively, from which the judges selected as the Champion Orchid of the Show *V.* Hilo Queen x *Asctm.* *curvifolium* 'Dream City' — owner, a very junior grower Greg Thomsen, who has not long ago graduated from the novice section of orchid growing.

Growers in this society usually table good quality dendrobiums, however, it would appear that the better class dendrobium is somewhat late in blooming this season, probably due to the hot dry summer months we have had in 1977-78. However, Mr. Daryl Watson won the Memoria Benita Brockell class for white dendrobium with his *Den.* Mauna Kea x *D.* *bigibbum* 'Album' x Margaret Fell — a raceme of eleven blooms and buds, presented in a small plastic pot of bark and charcoal.

Mrs. Castner, the show organiser won the class for a display of six orchids with foliage, whilst the winner of the coloured *Cattleya* section was *C.* Bow Bells 'Nodrog' x Mt. Hood, owned by P. & L. Cotton.

IPSWICH ORCHID SOCIETY

Autumn Orchid Show held on Saturday and Sunday, 8th and 9th April proved to be another successful presentation of orchids. The show was officially opened by Matron Sharpe of Colethorpe Private Hospital.

Displays were arranged around portions of the showroom of Merril Ford Motors of Ipswich, and the winning display "Orchids for Contentment" by Mr. and Mrs. L. Heinemann, carried some very nice dendrobiums, as well as the specimen *Milt.* Purple Queen, and *C.* Portia, *V.* 'Baroness' showing five lovely pale blue toned blooms. Other displays conveyed the themes, "April Showers", "Orchid Wonderland", "9th World Orchid Conference Bangkok".

Champion Orchid of the Show, *C.* Bob Betts x Hertha — was owned by Mr. Les Lobely — potted in a terra-cotta pot of bark and charcoal.

BRISBANE O.S. CHARITY ORCHID SHOW

The Brisbane Orchid Society held an Autumn Show on the 1st and 2nd April, and both the Society and the Queensland School for the Deaf Children, have every reason to be grateful to Mr. John Zupp for making the showroom available each year for the Charity Orchid Show.

The show was officially opened by Miss Jo-Anna Moore — Channel 7 TV personality.

Champion Orchid of the Show was a nice white shapely *Cattleya* Bob Betts x Bow Bells, owner Mr. N. Chambers — who received the Zupps Motors Trophy and the Beam Electrical Trophy for the entry.

Reserve Champion went to *Den.* phalaenopsis (syn. *schroederianum*) — Mr. Daryl Watson being the owner.

Mr. and Mrs. C. Rose won the B.O.S. Cup for the most outstanding entry by a society member — with their *V.* Pansai — a plant carrying a stem, above the foliage of 6 blooms, pale pink toning with maroon markings, the two ventral sepals being heavily marked, adding to its attraction. The plant of 12 months old was growing in a 4 inch wooden basket of charcoal and bark.

Mrs. Joan Zupp and associates were the winners in the multiple display section with their entry of "Anniversary Celebrations".

A Milestone for Tasmania

G. CHEQUER

"'Tasmania Comes of Orchid Age' — One weekend last October a large group of orchidists met together for the first Intra-state Orchid Conference".

This is how an article started to read in the Australian Orchid Review of March, 1969. At the Conference growers described their experience in cultivating various orchid genera. Frank and Jean Slattery were guests of honour.

At the last intra-state meeting in March of this year members discussed events that will represent another milestone for all local orchid societies — host to the 6th Australian Orchid Conference.

All four Tasmanian Societies will be getting together every three months to ensure that everyone is conversant with, and co-ordinating efforts towards making this Conference a memorable holiday for all registrants and their families.

Although we cannot offer the large range of nurseries one is normally accustomed to at such Conferences we think our scenery, architectural heritage, and hospitality is surpassed by no other state. Flexibility of itineraries will we hope, be the keynote so that everyone can make this a real holiday combined with a brief interlude with orchids.

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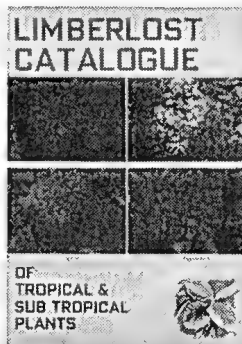
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Society Show Dates and Meeting Nights

NEW SOUTH WALES

Orchid Society of N.S.W. WINTERNA TIONAL ORCHID FESTIVAL. Merrylands Mall, Merrylands. Mon., 19th June to Saturday 24th during shopping hours. Setting up Sun. 19th. Australia's biggest winter show. **SPRING SHOW.** Roselands Shopping Centre. Mon., 18th September to Sat. 23rd in shopping hours. Both shows will be open on Tuesday to orchid growers only, and on Thursday late shopping. Meets 4th Mon., St. James' Parish Hall, cnr. Liverpool Rd. and Highbury St., Ashfield.

SYDNEY METROPOLITAN AREA

Australasian Native Orchid Society. **SPRING SHOW.** Mona Vale Memorial Hall, Fri., 8th Sept. and Sat. 9th, 9 a.m. to 9 p.m., Sun. 10th, 10 a.m. to 4 p.m. A must for native growers. Huge display of natives, including fine new hybrids. Show Marshal: Mr. N. Helliger, 4 Mangara St., Mona Vale. Phone 99-2468.

Bankstown Orchid Society. For show details contact Secretary, Mr. C. Fecknell, 223 William St., Yagoona. Phone 70-0348. Meets 2nd Mon.

Berowra and District O.S. SPRING SHOW. District Hall, Crowley Rd. and Berowra Waters Rd., Berowra. Fri. 15th Sept. Noon to 9 p.m., Sat. 9 to 9. A bright show. Refreshments served. **DENDROBIUM SHOW.** Baptist Hall, Berowra, 14th October 12.30 to 5 p.m. Light luncheon available. Meets 3rd Thursday at Berowra District Hall. Sec.: Mrs. C. Hart, 37 Willarong Rd., Mt. Colah 1079. Phone 47-4827.

Cumberland Orchid Circle. **WINTER SHOW.** Presbyterian Church Hall, 7 Castle Hill Rd., West Pennant Hills. Sat., 22nd July, 10 a.m. to 4.30 p.m. Plants to be benched 7.30-8.45 a.m., 22nd July. **SPRING SHOW.** Carlingford Court Shopping Centre, cnr. Pennant Hills Rd. and Carlingford Rd., Carlingford. Thurs. 24th Aug. to Sat. 26th shopping hours. Benching 6.30 to 8.15 p.m. Wed. and 7.30-8.45 Thurs. Meets 4th Wed. Sec.: Mrs. D. R. Jones, 121 Cardinal Ave., West Pennant Hills. Phone 84-3061.

Eastern Suburbs O.S. For show details contact Secretary, Mr. Ian Chalmers, 25 Turriell Point Rd., Caringbah. Phone 525-7215.

Eastwood and District Orchid Circle. **SPRING SHOW.** Masonic Hall, Rowe St., Eastwood. Mon., 25th Sept., 1.00 p.m. to 10 p.m., Tues. and Wed., 10 a.m. to 10 p.m., Thurs., 28th, 10 a.m. to 9.30 p.m. Sec.: Mrs. E. Allen, 31 Hampden Rd., Pennant Hills. Phone 84-1903.

Five Dock R.S.L. O.S. WINTER SHOW. Five Dock R.S.L. Club, 26th July, 8.00 p.m. Excellent prizes and trophies. A good one-night Show. **SPRING SHOW.** Drummoyne Civic Centre, Marlborough St., Drummoyne. Thurs., 5th Oct., 2.00 p.m. to 10 p.m., Fri. 6th, 10.30 a.m. to 10 p.m., Sat. 7th, 10 a.m. to 7.30 p.m. This show attracts the best late-flowering plants and should not be missed. Fine trophies. Many classes, particularly for species. Sec.: Mrs. Joyce Duncan, 102 First Ave., Five Dock. Phone 83-9072. Meets 4th Wed., Five Dock R.S.L. Club.

Ku-Ring-Gai Orchid Society. **SPRING SHOW** will be held in St. Andrews Church Hall, Hill St., Roseville, on Fri., 2nd Sept. noon to 9.30 p.m.,

Sat., 3rd, 9.30 a.m. to 9.00 p.m. Prize giving 8.30 p.m. Sat. 3rd. Sec.: Mrs. J. Kelly, 31 Hinemoa Ave., Wahroonga. Phone 487-1089. Meets 3rd Monday in Pymble Community Hall, Pacific Highway, Pymble.

Lidcombe Hospital O.S. SPRING SHOW. Main Hall, Lidcombe Hospital. Fri., 8th Sept., noon to 9 p.m., Sat., 9.30 a.m. to 9.30 p.m., Sun. 10th, 10 a.m. to 4.30 p.m. Good show for cymbidiums. Sec.: Mrs. M. Rowe, 9 Bettington Rd., Dundas 2117. Phone 630-7849. Meets 2nd Wed., Lecture Room, Main Hall, Lidcombe Hospital.

North Shore O.S. WINTER SHOW. Willoughby Town Hall, Wed., 7th June, on regular meeting night. **SPRING SHOW.** Arndale Shopping Centre, Frenchs Forest. Wed., 13th Sept. to Sat. 16th during shopping hours. Variety of genera and quality is hallmark of this show. Sec.: Mr. R. J. Rochfort, 6 Dalrymple Ave., Lane Cove. Phone 42-2575. Meets 1st Wed., Willoughby Town Hall, near Chatswood railway station.

Manly-Warringah O.S. SPRING SHOW. Memorial Hall, Pittwater Rd., Mona Vale. Fri., 25th Aug. 4 p.m. to 8 p.m., Sat. 26th, 8 a.m. to 8 p.m., Sun. 27th 8 a.m. to 4 p.m. Always a good show for quality, demonstrations and sales. Sec.: Mrs. Jill Upton, 71 Wesley St., Elanora 2101. Phone 913-9438. Meets 4th Thurs. at Narrabeena Community Hall, Oceania St., Narrabeena.

Panania-East Hills R.S.L. O.S. 26th ANNUAL ORCHID EXHIBITION. Panania Senior Citizen's Centre, Anderson Ave., Panania. Sat. 23rd Sept., 10 a.m. to 6 p.m. Set up Fri. 8.30-9.30 p.m. and Sat. 7 to 8.30 a.m. Sec.: Mr. D. Roberts, 70 Apex Ave., Picnic Point. Phone 771-5474. Meets 1st Tues. at Panania-East Hills R.S.L. Club, 28 Childs St., Panania.

Parramatta and District O.S. WINTER SHOW. Wentworthville Community Hall on usual meeting night 25th July. **SPRING SHOW.** Parramatta Westfield Shopping Town, Parramatta. Mon. 4th Sept. to Sat. 9th, during shopping hours. Features N.S.W. Miniature and Novelty Cymbidium Championships. Meets 4th Tues., Wentworthville Community Hall.

St. George O.S. WINTER SHOW. Rockdale Methodist Church Hall, Bay St., Rockdale, Tues., 4th July. One night show on meeting night, visitors welcome. **SPRING SHOW.** Venue above. Tues., 5th Sept., trophy classes for financial members. A friendly night, visitors very welcome. Sec.: Mrs. Jean Slattery, 12 Eddystone Rd., Bexley. Phone 50-7985. Meets 1st Tues. at Rockdale Methodist Hall.

Southern Districts Combined Show. Sutherland, St. George, Sydney and Bankstown Orchid Societies combine to stage this late **SPRING SHOW** in the Masonic Hall, Forest Rd., Bexley (southern end of shopping centre). Sat., 30th Sept., 11.00 a.m. to 9.00 p.m., Sun. 1st, 1.00 p.m. to 9.00 p.m., Mon. 2nd, 9.00 a.m. to 5.00 p.m. Big prize money. Floral art open to all comers. Show caters for fine, late Spring flowers. Enquiries to Mr. Ken Hodges, 45 Wonga Rd., Yowie Bay 2228. Phone 525-5101.

Sydney Orchid Society. **WINTER SHOW.** Remembrance Hall, 220 Lakemba St., Lakemba. Tues. 8th June, 7.30 p.m. Members, with visitors table.

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SPRING SHOW. Venue as above, 14th Sept., 7.30 p.m. Members show, with visitors table. Sec.: Mrs. Marlene Whiteman, 72 Duntroon St., Hurlstone Park. Phone 55-6307. Meets 2nd Thurs. at Remembrance Hall.

Western Suburbs O.S. SPRING SHOW. Presbyterian Church Hall, Correy's Ave., South Strathfield. Tues., 12th Sept. at 8 p.m. Trophy for best visitor's orchid. Sec.: Mr. E. J. Li'lis, 12 Knocklayde St., Ashfield 2131. Phone 797-9995. Meets 2nd Tuesday at above address.

Sutherland Shire O.S. WINTER SHOW. Donally Datsun Showroom, Princes H'way., Kirrawee (cnr. Kingsway). Sat., 1st July 10 a.m. to 9 p.m. and 2nd July 10 a.m. to 5 p.m. Open show. Wide range of quality genera. Set up Fri. 7.30 p.m. **SPRING SHOW.** See Southern Districts Combined Show. Sec.: Mr. W. Chapman, 8 Johnson Ave., Kirrawee 2232. Phone 521-6082. Meets 2nd Monday at Community Centre, Gynea Rd., Gynea.

NEWCASTLE AREA

Newcastle District Combined Orchid Societies. **WINTER SHOW.** Garden City Shopping Centre, Kotara. Thurs. 13th July to Sat. 15th in shopping hours. Setting up Wed. 12th, 5.30 p.m. to 9.00 p.m. Judging commences 9.00 p.m. **SPRING SHOW.** Garden City Shopping Centre, Wed., 27th Sept. to Fri. 29th Sept., shopping hours. Setting up Tues. 26th, 5.30 p.m. to 9.00 p.m. Sec.: Mrs. Frances Cusack, P.O. Box 186, Toronto 2283. Phone (049) 59-1635. Combined Societies meet 1st Mon. of every 2nd month at Teralba Community Hall.

Newcastle Orchid Society. **SPRING SHOW.** MacKies Building, King and Auckland Sts., Newcastle. Wed., 6th Sept., 1.00 p.m. to 10.00 p.m., then Thurs. to Sat., 10 a.m. to 10 p.m. Held during Mattara week of Shows and Festivities — a fine time to holiday in the Hunter Valley. Sec.: Mr. Norm Hellier, 17 Stanley St., Merewether. Phone 61-2989. Meets 4th Tues., G.U.O.O.F. Hall, Steel St., Hamilton.

Boolaroo O.S. SPRING EXHIBITION. "BIG W" Shopping Centre, Jesmond. Wed., 13th Sept. to Sat. 16th in shopping hours. Sec.: Mrs. J. Parker, 68 Mills St., Warners Bay. Phone 48-9109. Meets 1st Wed., Teralba Community Hall.

Maitland and Coalfields District O.S. SPRING SHOW. Sharton Motors Showroom, High St., Maitland (opp. Town Hall). Thurs., 21st Sept. to Sat. 23rd, each day 9 a.m. to 9 p.m. Sec.: Mr. Eddie Hunt, Windermere Rd., Lochinvar 2321. Phone (042) 30 7300. Meets 3rd Thurs., at Literary Institute, Banks St., East Maitland.

Morisset and District O.S. SPRING SHOW. Toronto Community Hall. Thurs., 21st Aug., Fri. 1st Sept. and Sat. 2nd during shopping hours. Set up Wed. 30th, 6.30 to 10 p.m. Sec.: Mr. Ken Fethers, 17 Lakeview Rd., Morisset Park.

Swansea-Belmont O.S. SPRING SHOW. For details contact Secretary, Mr. L. Ward, 16 Maneela St., Blacksmiths. Phone 75-1422. Meets 4th Fri., Masonic Hall, Gen St., Belmont.

N.S.W. COUNTRY

Alstonville and District O.S. SPRING SHOW. Agriculture Hall, Commercial St., Alstonville. Sat., 30th Sept. 11 a.m. to 6 p.m. Sec.: Mrs. M. Lancaster, 16 Parklane Drive, Alstonville. Phone Mr. Chalker, President, 28-0408.

Byron District O.S. SPRING SHOW. Civic Hall, Mullumbimby. Fri., 15th Sept. 9 a.m. to 9 p.m., Sat. 16th, 9 a.m. to 8 p.m. Sec.: Mrs. E. Summers, Goonengerry Rd., Federal 2480. Meets 2nd Mon., successive months at Mullumbimby, Byron Bay and Bangalow.

Campbelltown and District O.S. WINTER SHOW. Presbyterian Church Hall, Lithgow St., Campbelltown. Tues., 18th July, 8 to 10 p.m. **SPRING FESTIVAL.** Campbelltown City Civic Hall, Queen St., Sat., 23rd 10.30 a.m. to 6 p.m., Sun. 24th 11 a.m. to 6 p.m. Glorious variety with emphasis on rare and beautiful native orchids. Sec.: Mr. K. Bursill, 11 Condamine St., Campbelltown. Phone (064) 25-2534. Meets 3rd Tues., Presbyterian Hall.

Casino and District O.S. SPRING SHOW. R.S.L. Hall, Canterbury St., Casino. Fri., 22nd Sept. and Sat., 23rd Sept. Sec.: Mrs. D. J. Miller, 12 Clarence St., Casino. Meets 4th Fri. in Old Bowling Club House, Convent Parade.

Coffs Harbour O.S. SPRING SHOW. Supper Room, Coffs Harbour Civic Centre. Fri., 8th Sept., Sat. 9th and Sun. 10th, 9 a.m. to 9 p.m. Sec.: Mr. R. M. Smith, Coramba Rd., Coffs Harbour 2450. Phone (066) 53-8249. Meets 1st Thurs. at Cavanbah Hall, High St., Coffs Harbour.

Corrimal O.S. WINTER SHOW. Corrimal Court Shopping Centre. Thurs., 27th July to Sat. 29th during shopping hours. **SPRING ORCHID FESTIVAL.** Corrimal Court, Mon., 18th Sept. to Sat. 23rd Sept. during shopping hours. Setting up after 5 p.m. Sunday 17th. All members of affiliated societies welcome to exhibit.

Gloucester District O.S. SPRING SHOW. For details contact Secretary, Mr. W. N. Stanton, R.M.B. 295, Buckets Rd., Gloucester. Meets 4th Thurs. at the home of the President, Mrs. J. Hawdon, 15 Queen St., Gloucester.

Gosford and District O.S. WINTER SHOW. Imperial Centre, Mann St., Gosford. Mon., 17th July to Sat. 22nd in shopping hours. **SPRING SHOW.** Imperial Centre, Mon., 18th Sept. to Sat. 23rd in shopping hours. Sec.: Mr. Bob Zeller, P.O. Box 541, Gosford 2250. Phone 69-1359. Meets 4th Thurs., C.W.A. Rooms, Donnison St., Gosford.

Grafton District O.S. For details contact Secretary, Mr. Noel Skennar, River Rd., Great Marlow via Grafton 2460. Phone (066) 42-4813. Meets 3rd Wed. in St. Mark's Hall, Fry St., Grafton.

Hastings River O.S. SPRING SHOW. C.W.A. Hall, High St., Wauchope. Fri., 22nd Sept. noon to 9 p.m., Sat. 23rd 9 a.m. to 9 p.m. Mid North Coast Champion Trophy. Sec.: Mr. N. Barlin, P.O. Box 193, Wauchope 2446. Phone 362. Meets 2nd Fri., Olympic Pool Meeting Room, Wauchope.

Illawarra District O.S. WINTER SHOW. Warrawong Shopping Centre, Warrawong. Thurs., 20th July to Sat. 22nd in shopping hours. **SPRING SHOW.** Crown Central Shopping Centre. Wed., 28th Aug. to Sat. 2nd Sept. in shopping hours. The biggest show on the coast. Sec.: Mr. J. R. Hinton, 8 Antrim Ave., Warilla 2528. Phone 96-2171. Meets Wenham Oval Hall, Old Port Kembla Rd., Port Kembla.

City of Lismore O.S. SPRING EXHIBITION. Cedar Room, Lismore Town Hall. Mon., 4th Sept. 1.00 p.m. to 9 p.m., Tues. and Wed., 9 a.m. to 10 p.m., Thurs., 8th, 9 a.m. to 6 p.m.

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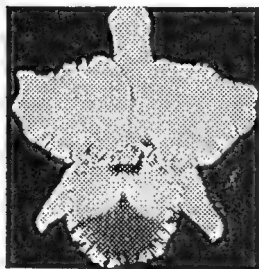
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- Potting demonstrations and sale table. Sec.: Mrs. R. I. Hobbs, Bruxner H'way, Wollongbar 2480. Phone (066) 29-7315. Meets 3rd Tues., Red Cross Rooms, Keen St., Lismore.
- Manning River O.S. ANNUAL SHOW.** Presbyterian Hall, Albert St., Taree. Thurs., 14th Sept. noon to 9 p.m., Fri. 15th 9 a.m. to 9 p.m. Sec.: Mr. R. M. Richardson, Hillview Rd., Tinonee 2430. Meets 1st Fri. in Presbyterian Hall, Albert St., Taree.
- Shoalhaven O.S. WINTER SHOW.** Presbyterian Church Hall, Kinghorn St., Nowra. Thurs., 6th July noon to 9 p.m. **SPRING SHOW.** Presbyterian Hall. Fri., 15th noon to 9 p.m., Sat. 16th 10 a.m. to 9 p.m. Sec.: Mr. A. L. Grady, 142 Penguin Head Rd., Culburra. Phone 47-1414.
- Southern Riviera O.S. SPRING SHOW.** Civic Centre, Ulladulla. Sat., 30th Sept. from 10 a.m. Sec.: Mrs. M. Carter, P.O. Box 124, Milton 2538. Phone 55-2196. Meets 1st Fri. at 7.30 p.m. in Kendall Cottage, Ulladulla.
- Tweed District O.S. BANANA FESTIVAL SHOW.** Autumn Club, Murwillumbah. Thurs. and Fri., 31st Aug., 1st and Sat. 2nd Sept., all 9 a.m. to 9 p.m. Banana Festival activities make this an interesting time to be in Murwillumbah. Sec.: Mr. D. Capner, Kielvale via Murwillumbah 2484. Phone (066) 72-2951. Meets 3rd Thurs. Autumn Club, Murwillumbah.
- QUEENSLAND**
- Queensland Orchid Society. SPRING SHOW.** Venue: Mt. Cootha Botanical Garden. Details from Hon. Sec.: Box 2002, G.P.O., Brisbane 4001. Meets 2nd Mon. at Metropolitan Senior Citizens' Centre, McLachlan St., Valley.
- Aspley O.S. SPRING SHOW.** Sat., 23rd and Sun 24th Sept.
- Caboollure O.S. SPRING SHOW.** R.S.L. Hall, Caboollure. Fri., 25th and Sat. 26th Aug.
- Bundaberg O.S. SPRING SHOW.** In conjunction with quarterly meetings of Sub-Tropical Orchid Council on 29th and 30th Sept. All affiliated societies, Emerald, Rockhampton and Gladstone participating. Enquiries to Mrs. N. Maughan, M.A. 108, Seaview Rd., Bundaberg 4670.
- Darling Downs Orchid Association.** For show details contact Secretary, Mrs. S. Stone. Phone 32-6513. Meets at Scout's Hall, Ruthven St., Toowoomba, 3rd Thurs. of month.
- Eastern Districts O.S. SPRING SHOW.** Guardian Angel's School Hall, Bay Tce., Wynnum. Sat., 16th Sept. and Sun. 17th 9 a.m. to 9 p.m. Sec.: Mr. F. Geary, P.O. Box 60, Wynnum Central 4178. Phone 8570. Meets 4th Thurs. at Guardian Angel's Hall.
- Emerald Orchid and Foliage Society. SPRING SHOW.** 16th and 17th Sept. For details contact the secretary, c/- P.O. Box 21, Emerald, Queensland 4720. Emerald is inland from Rockhampton.
- Gold Coast O.S. SPRING SHOW.** Contact Secretary, Mr. Neil Wilesmith, P.O. Box 323, Burleigh Heads 4220. Phone 35-5335.
- Ipswich O.S. SPRING SHOW.** Merrill's Motors, Brisbane St., Ipswich. Sat., 2nd and Sun. 3rd Sept. 9 a.m. to 5 p.m. Sec. Mrs. Gwen Stumer, Mt. Crosby. Phone 201-0126. Meets 1st Wed., Adult Education Centre, Brisbane St., Ipswich.
- Maryborough District O.S. SPRING SHOW.** St. Paul's Memorial Hall, Adelaide St., Maryborough on Fri., 15th Sept. 8 a.m. to 9 p.m. and Sat. 16th 8 a.m. to 8 p.m. Free admission. Sec.: Mrs. J. Gilmer, P.O. Box 389, Maryborough, Q'land. 4650.
- Mareeba Orchid and Pot Plant Society.** The annual show is held about the middle of April each year and is well worth a visit. Sec.: Mrs. P. Keegan, P.O. Box 753, Mareeba 4880. Meets Presbyterian Hall on 2nd Tues.
- North Coast O.S. NAMBOUR SPRING SHOW.** Civic Hall, Nambour. Fri. and Sat. 1st and 2nd Sept. Hon. Sec.: Mrs. Vera Usher, P.O. Box 140, Nambour 4560.
- Orchid Species Society. SPRING SHOW.** New Botanical Garden's Function Room, Mt. Cootha. For date contact secretary. Meets 3rd Mon., Bread House, Wickham Tce. Sec.: Mrs. H. Young, 18 Bella Vista Tce., Paddington 4064. Phone 36-1328.
- John Oxley District O.S. WINTER SHOW.** For Show details contact Secretary, Mrs. J. Imray, 26 Lance St., Corinda 4075. Phone 379-6733. Meets 2nd Wed. at Presbyterian Hall, Oxley Rd., Sherwood.
- North Brisbane O.S. SPRING SHOW.** Contact Secretary, Mr. T. Butler, 233 Thistle St., Gordon Park 4031. Phone 57-2858. Meets 4th Thurs. (except December) at Church of England Hall, Froude St., Banyo.
- Redcliffe O.S. SPRING SHOW.** Fri., 8th to Sun. 10th Sept.
- Rockhampton O.S. SPRING SHOW.** Held as part of Capricana Week Festivities. Possibly second week-end in Sept. This is an exciting time for visitors to holiday in Rockhampton. Contact Secretary Mr. Terry Dean at 270 Clanfield St., North Rockhampton 4701 for details. Phone 28-2278.
- Toowoomba Orchid Society. ANNUAL SPRING SHOW.** Myer Roof-Top Car Park, held during the **Carnival of Flowers.** This is an exciting week in which to visit Toowoomba. Show open 9 a.m. to 10 p.m. daily. Meets 4th Fri. evening of month at St. James' Parish Hall, Russel St. Sec.: Miss E. Miles, 6 Somme St., Toowoomba. Phone 32-7154.
- Wynnum-Manly District Orchid Society. SPRING SHOW.** For details contact Secretary Mrs. R. Salisbury, 5 Britannia Pde., Manly 4179. Meets 3rd Wed. in Assembly Hall, Moreton Bay College, Bay Tce., Wynnum Central.
- Townsville Orchid Society. SPRING SHOW.** Probable venue will be St. Matthew's Hall. Dates are 4th, 5th and 6th Aug. (Thurs. to Sat.). For details contact Secretary, Mrs. M. King, P.O. Box 83, Townsville 4810.
- West Moreton O.S. SPRING SHOW.** Thurs., 14th to Sat. 16th Sept.
- SOUTH AUSTRALIA**
- Orchid Club of South Australia. WINTER SHOW.** Australian Mineral Foundation Building on the night of 11th July. Exhibits must be benched by 7.45 p.m. **SPRING SHOW.** John Martin's Auditorium. North Tce. Mon., 25th Sept. to Sat. 30th, 9 a.m. to 10 p.m., Sat. 8.30 a.m. to 11.30 a.m. Proceeds to aid St. John Ambulance. Theme: **Orchids around the world.** Hon. Sec.: Mr. D. J. Harris, 38 Princes Rd., Torrens Park 5062. Phone 71-9511. Meets 1st Thurs. in month, except that this year meetings in Aug. and Sept. will be 2nd Thurs. Meeting place is Australian Mineral Foundation Building, Conyngham St., Frewville.
- Whyalla Orchid Club. ORCHID SHOW.** Westlands Shopping Mall, Whyalla. Thurs., 28th Sept. to Sat., 30th Sept. in shopping hours. For informa-

tion on this show and society contact the Secretary Mrs. W. Hayes, 158 Cartledge Ave., Whyalla Stuart 5608.

South Australian Orchidaceous Society. WINTER SHOW. Thebarton Assembly Hall. Sat., 22nd July, noon to 9 p.m., Sun. 23rd 11.30 a.m. to 4 p.m. SPRING SHOW. Arndale Shopping Centre, Torrens Rd., Kilkenny. Mon., 25th Sept. to Sat. 30th Sept. For details contact Mrs. E. G. Shawyer, 60 Balfour St., Nailsworth 5083. Meets Thebarton Assembly Hall on 3rd Wed.

South Coast O.S. WINTER SHOW. Lutheran Church Hall, Brodie Rd., Christies Downs. Tues., 11th July, 7.30 p.m. (usual meeting night). Visitors welcome at meetings and shows. SPRING SHOW. Marion City of Shops, 297 Diagonal Rd., Oaklands Park. Theme: **Springtime elegance with orchids.** Set up Sat., 30th Sept. 1 p.m. Open normal shopping hours Mon., 2nd Oct. to Sat. 7th. Plants and blooms for sale. Floral art a feature of both shows. Sec.: Mr. H. G. Viney, 563 Brighton Rd., Brighton 5048. Meets 2nd Tues. in Lutheran Church Hall, Brodie Rd., Christies Downs.

VICTORIA

Victorian Orchid Club. WINTER SHOW. Doncaster Shopping Town. Mon., 24th to Fri. 28th July during shopping hours. Special awards for theme **Queen's Jubilee.** SPRING SHOW. Details not to hand at time of going to press. Contact Secretary, M. J. W. Skews, 6 Parkdale Ave., North Eltham 3095. Phone 439-1736. Meets 3rd Mon. at St. John's Church of Eng'land Hall, Toorak Rd., Toorak.

Melbourne Eastern O.S. SPRING SHOW. Chadstone Shopping Centre. Thurs., Sept. 21st to Sun. 24th. A fine show. Mr. A. Wilson, 1 Arthur St., Murrumbena 3163. Phone 569-7689. Meets last Mon. in St. John's Hall, Camberwell Junction.

Warringal (Heidelberg) Orchid Society. For show details contact Honorary Secretary Mrs. M. Murray, 60 McArthur Rd., East Ivanhoe. Phone 49-3408. Meets 1st Wed. at Heidelberg Bowling Club.

Mornington Peninsula O.S. For show details contact Secretary Mrs. J. S. Brighton, "Hamers'ey", Canadian Bay Road, Mt. Eliza 3930. Phone 787-1347. Meets 4th Fri., Masonic Hall, Mornington.

WEST AUSTRALIAN SHOW DATES

Orchid Society of West Australia. For show details contact Hon. Sec.: Mrs. L. Dodd, 61 Canavan Cres., Manning, W.A. 6152. Phone (09) 450 3472. Meets 4th Fri. in Science House, 10 Hooper St., West Perth.

Melville Districts O.S. SPRING SHOW. For details contact the secretary. The Melville O.S. meets

AUSTRALIAN ORCHID REVIEW, JUNE, 1978

2nd Thurs. at the Roy Edinger Hall, cnr. Canning H'way, and Stock Rd., Palmyra. Hon. Sec.: Mr. R. E. Lander, 29 Tain St., Applecross. Phone 64-2937.

Northern Districts O.S. SPRING FESTIVAL. For show details contact the Secretary, Mr. Bernie Arrat, 8 Nelley St., Morley. Meets Scout Hall, Doyle St., Morley on 4th Mon. of month.

Wanneroo Orchid Society. For show details contact Secretary, Mr. E. R. Kemp, 447 Main St., Balcatta. Phone 349-2545. Meets 3rd Thursday in lesser hall Wanneroo Civic Centre.

TASMANIA

Tasmanian Orchid Society. SPRING SHOW. For details contact Secretary, Mr. J. F. Smith, 11 Warren Court, Howrah 7018. Phone 44-1555. Meets 4th Mon., R.S.L. Club Rooms, Victoria St., Hobart.

Devonport O.S. SPRING SHOW. Devonport Town Hall. Fri., 6th Oct. to Sun. 8th Oct. New Secretary is Mr. Warren Richards of Turners Beach Rd., Ulverstone. Correspondence to be addressed to P.O. Box 805, Devonport 7310. The society meets 3rd Wed. (except January) at Don Matriculation College, Watkinson St., Devonport.

Launceston O.S. SPRING SHOW. Masonic Hall, Brisbane St., Launceston. Fri., 6th Oct. 2 p.m. to 9 p.m. with official opening 3 p.m., Sat. 7th 10 a.m. to 9 p.m., Sun. 8th 10 a.m. to 5 p.m. Sec.: Mrs. M. E. Ferrall, 4 Luxmore Place, Launceston 7250. Meets 3rd Tues. at Margaret McIntyre House, Park St.

Orchid Society of North-West Tasmania. SPRING SHOW. Adult Education Centre, North Terrace, Burnie. Dates will be Mon. 9th to Fri. 13th Oct. For details contact Secretary, Mrs. J. Samec, 281 Bass H'way, Ocean Vista, Burnie. Meets 1st Wed., Hellyer College, Mooreville Rd., Burnie.

NEW ZEALAND

New Zealand Orchid Society. WINTER SHOW. 6th, 7th and 8th July. SPRING SHOW. 21st, 22nd and 23rd Sept. Both Shows will be held in the Mt. Albert War Memorial Hall, New North Rd., Mt. Albert. Sec.: Mr. C. H. Brindle, 24 McIntyre Rd., Mangere Bridge, Auckland.

Other New Zealand Orchid Societies. There are many fine orchid societies throughout New Zealand. Most of these are members of the New Zealand Orchid Council. New Zealanders requiring the address of their nearest society, and visitors wishing to call at N.Z. meetings or shows should write to the Secretary of the Council, Mrs. R. Wray, 69 Devon St. East, New Plymouth. The Council's publication **Orchids in New Zealand** is recommended. Subscription: N.Z. \$5.50, Australia \$NZ6.00.

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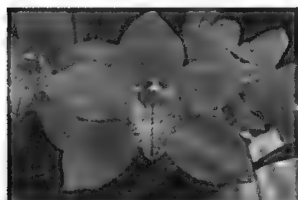
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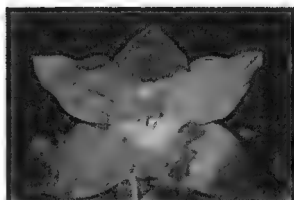
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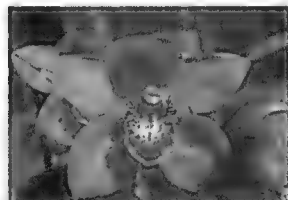
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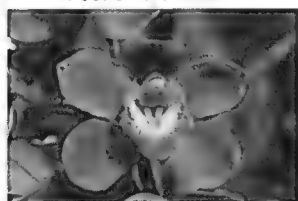
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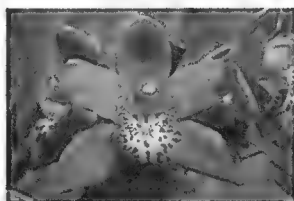
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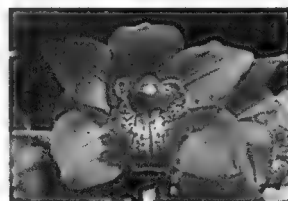
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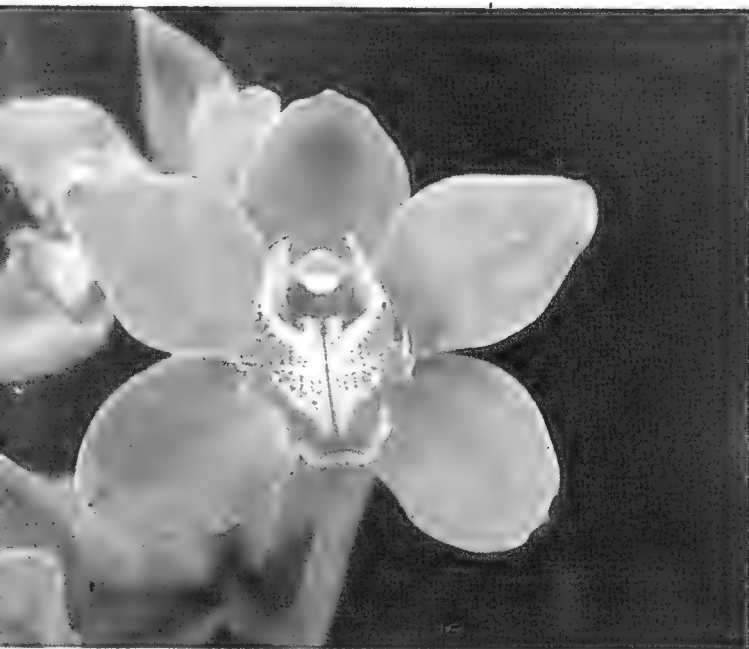
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Australian Orchid Review

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Volume 43, No. 3

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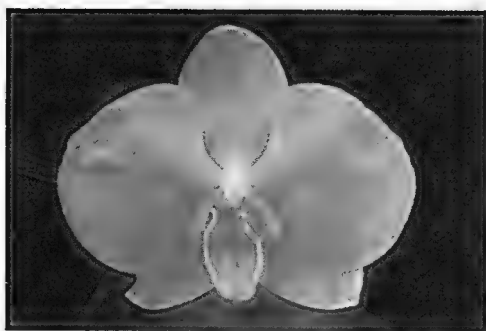
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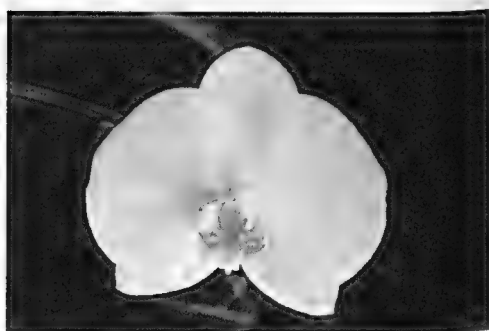
Dendrobium bigibbum var. *superbum* 'Tanya', CCC/QOS

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Through the courtesy of Mr. Gerald McCraith, Director of The Orchid Foundation, we are proud to announce that Flasks of Odontoglossum Seedlings, approx. 30 plants to a 300 ml. Flask at \$25.00 a Flask or multiples of 6 Flasks for \$120.00, will be available in February, 1978. There will be 10 crosses available and Lists will be available on request. All the proceeds from the Sales of these Flasks will go to the Funds of The Australian Orchid Foundation. The Parents used are from stock imported from the U.K. by Mr. Gerald McCraith and comprise of some of the finest stock in the World. This is a wonderful opportunity to update your Collection at a reasonable price. Flasks will also be available from McKinney's Nursery, 87 Turton Street, Sunnybank, Queensland and Hodgins Orchids, P.O. Box 108, Frankston, Victoria.

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To the orchid breeder, tomorrow must always be filled with promises — or there can be no tomorrow . . .

We at Stewart's have been making promises come true for over 30 YEARS! Now our promises of tomorrow are shown in our NEW LISTS . . .

1979 COLOUR CATALOG — is expected to be out in October, 1978

1979 MINIATURE CYMBIDIUM LIST

1979 CONVENTIONAL CYMBIDIUM LIST

1979 CATTLEYA CRITERION LIST OF SELECTED VARIETIES

FRANK SLATTERY — will have them for you as soon as available. Please write to reserve your copy — see opposite page for costs.

Please address all correspondence to:

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Orchids of Merit
12 Eddystone Road,
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Expected colour, pale pink speckled cerise. 4½" \$4.00. 5½" \$6.00.

Mericlone Pot. Gordon Sui 'Red Radiance' AM/AOS.
Light Red. Flowering size \$10.00 each.

Mericlone Lc. Lee Langford 'Copper Queen' HCC/ODC.
Beautifully yellow — bronze flowers — large and of good shape, red lip. 4½" \$10.00 each.

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Extensive range of Cymbidiums and Softcane Dendrobiums always on hand.

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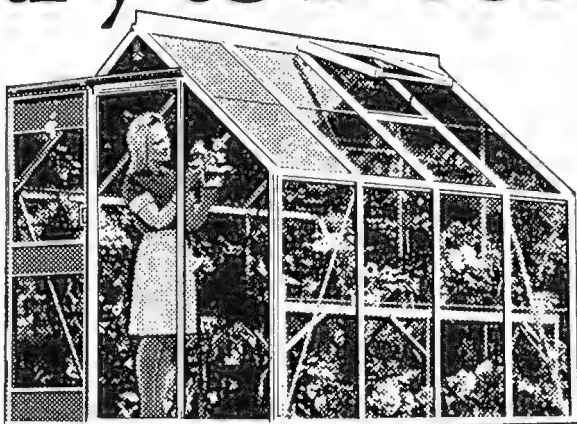
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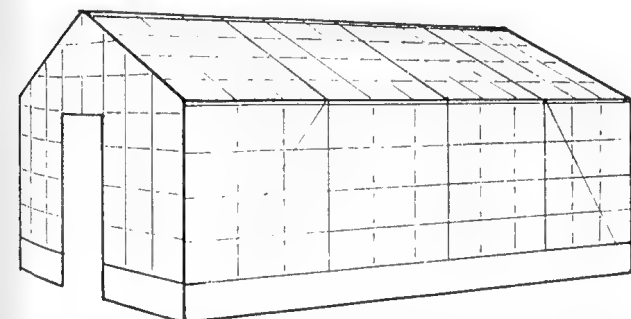
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Illustrated (left):

Nominal Widths: 10 ft., 12 ft., 14 ft., 16 ft., 18 ft., 20 ft., 22 ft., 24 ft.
Also produced in 50 ft. width.

Standard Modules: Available in multiples of 7 ft. 10½ in.

Wall Height: 7 ft. 0 in.

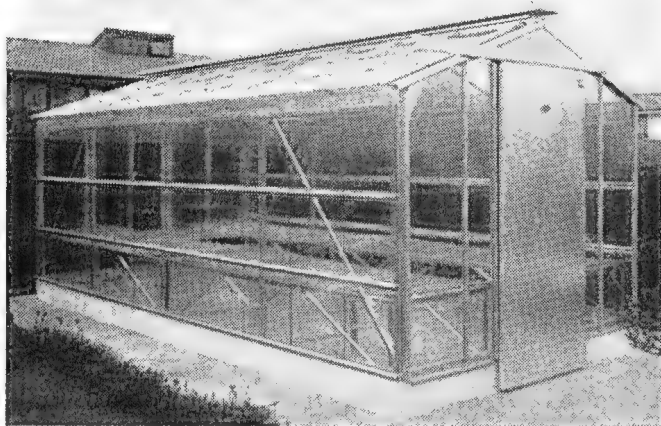
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Ventilation: Horizontal glazing on side walls provides for ventilation anywhere along the side walls.

Materials: Lysaght Galvabond used throughout. Trusses made from 3" x 1¼" rectangular tube which simply socket together. All units designed to use standard 16" x 24" Horticultural Glass.

Options: Benches, full length opening ridge vent, side wall louvres, doors both ends, hail guards, hanging basket rails, short walls.

DOMESTIC and PROPAGATION



Illustrated (right):

8 ft. x 15 ft. 9 in. glasshouse

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7 ft. 10½ in. (2.4 metres)

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ODONTOGLOSSUM SEEDLINGS IN FLASKS

from the collection of
MR. GERALD McCRAITH

We are pleased to offer the above 300 ml flasks of approx. 30 seedlings at \$25 each or multiples of 6 flasks for \$120.

A descriptive list of the 10 crosses, cultural information and deflasking procedure will be available on request.

The proceeds from the sale of these flasks will go to the funds of The Australian Orchid Foundation.

Flasks will also be available from:

Frank Slatterys Orchid Nursery, 12 Eddystone Road, Bexley, N.S.W.

McKinneys Nursery, 87 Turton Street, Sunnybank, Queensland.

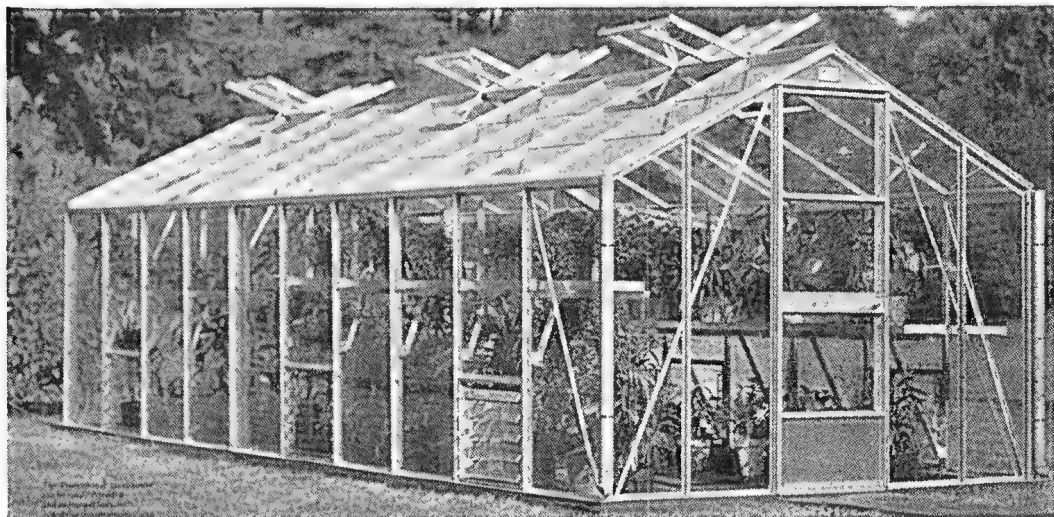
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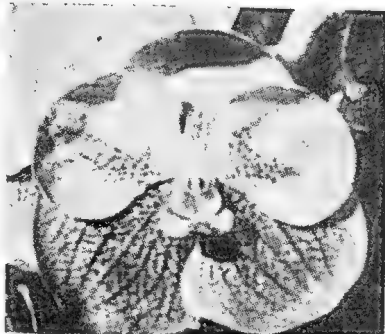
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These clones, apart from their show winning potential, large size and exquisite beauty are at the pinnacle of cut flower standards.

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FMK	FUSILIER 'Man of Kent' Exceptional pink. Highly productive. Mid-season.	\$8.00
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AWK	Bic. AMY WAKASUGI 'La Tuilerie' Very dark Normans Bay hybrid, with perfect shape.	\$12.00
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JMC	Lc. JANICE MATHEWS 'Ceylon' Glowing chestnut brown, six flowers per stem.	\$9.50
OGI	Bic. ORANGE GLORY 'Empress' FCC/RHS Rich lemon yellow flowers with a frilled lip.	\$10.00
PAS	Bc. PASTORAL 'Innocence' Outstanding white.	\$10.00

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CATTLEYA — CYMBIDIUM — VANDA
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Closed Sundays

Phone: 345-1916

ODONTOGLOSSUM SEEDLING FLASKS

Mr. Gerald McCraith has hybridised some of his best Odonoglossums and flasks of seedlings from these crosses will be available in June, 1978. Send for list now.

ALL PROCEEDS GOING TO THE AUSTRALIAN ORCHID FOUNDATION.

These flasks will also be available from Frank Slattery in Sydney and Hodgins Orchids in Melbourne.

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EXCLUSIVE RELEASE

LC. ORIENTAL SPLENDOR 'SAKORN'.

A magnificent yellow cattleya with wide petals almost touching and a solid red lip. An excellent grower doing very well in flasks.

10 plants in flask	\$20.00
30 plants in flask	\$40.00



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An outstanding mericlone of the varicosum type, 2½" full yellow labellum and carrying up to 30 blooms. A must for Oncidium lovers. Colour print will be supplied with each flask.

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Flasks	\$20.00 each.
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R. G. & I. PRICE

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On Queensland's Gold Coast

CATTLEYA SEEDLINGS

Blc. Lonesome Cove x Lc. Walter Slagel 'Iris' HCC/NSW. Large lavender pinks.
Lc. Amberglow 'Bangkok' x Lc. Waianae Sunset 'Pokai'. Remake of Lisa Ann, red, yellow, bronze.
Slc. Paprika 'Golden Delight' x Blc. Malworth 'Orchidglade' FCC. Gold to copper, good substance.

Lc. Grubstake x Blc. Crispin Rosales No. 2. Dark lavender, exhibition types.

Lc. Scarlet Imp 'Irene' x Slc. Naomi Kerns 'Saffron Glow'. A colourful multiflora.
C. Pernel Geo. Barnett x Bc Mount St. Helens 'Lester'. Fragrant blush pinks.

CATTLEYA MERICLONES

Lc. Mem. Dr. Peng 'Deep'. Full shape white bloom with red-purple flares to petals and full burgundy lip.
Blc. Ranger Six 'A-OK' AM/AOS. Large showbench white with outstanding yellow labellum.

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Onc. Lanceanum x self. A fine 'mule ear' type, many mahogany and lavender blooms, fragrant.

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C. Burgundian 'Chateau' FCC / RHS. Famous copper red.

C. Earlyana x Babylon C.H. New clone, fine June pink.

C. Highland Mist 'Dillabirra' FCC/AOS. Top quality show white.

ALL FLASKS ARE \$20.00 ea.

Seeding flasks contain 25 plants, mericlone flasks contain 10. A.O.R. special offer: Any 5 flasks \$95.00 airfreight free in Australia. Additional flasks \$18.00 each. This offer good for 6 months. Most flasks available now, others in Oct./Nov. Please send remittance with order, refunds will be made where out of stock, or you may nominate alternate choice.

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S.A.E. please.

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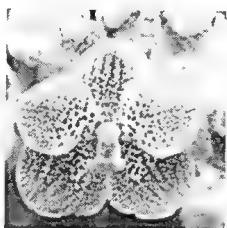
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Australian Orchid Review

SEPTEMBER, 1978

VOLUME 43

No. 3

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THE HARBOUR PRESS, P.O. Box 160, Sydney Mail Exchange, N.S.W., Australia 2012.

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Australia: Aust. \$6.00 per annum.
Overseas: Surface mail Aust. \$8.00 (U.S. \$11.00) per annum. Airmail Aust. \$14.00 (U.S. \$18.00) per annum.

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COVER STORY

This superbly flowered clone of *Dendrobium bigibbum* var. *superbum* was grown by Mr. Wal Ellison of Salisbury, Queensland, and has been awarded a Certificate of Cultural Commendation by the Queensland Orchid Society. The plant had 70 racemes, each with eight blooms. It was purchased, as a three cane plant, in 1971 from a North Queensland grower for 30 cents. Mr. Ellison grows it in charcoal and bark, and it is now in a 20 cm terra cotta pot after being potted on about every two years. The glasshouse has a westerly aspect and is kept humid by regular damping down. Congratulations Mr. Ellison.

A NEW WONDERLAND OF ORCHIDS

THE WESTERN PROVINCE OF PAPUA NEW GUINEA

ANDREE' MILLAR

The Western Province of Papua is a lonely, sparsely inhabited land of many rivers which spread through the endless miles of swamp and few people realise that this river and swampy country rises slowly in the far corner of the province to the high mountains which are shown in the far corner of the map. In the wet season one can travel over much of the land by boat, either out-board motor or small canoe. In the dry season one sails up the rivers in trawlers or small fishing boats and between the rivers it is a combination of mud, swamp and mosquitoes. Travelling as I did the last time, I left Daru in the trawler and sailed up one river after another beginning with the Orimo and finally the Bensbach, the corner of which delineates our country with West Irian: one corner of the river entrance belongs to West Irian, and the river then turns sharply back into the Western Province of Papua New Guinea.

The coastline as seen from the deck of a trawler, as one sails well out beyond the far reaching reefs, is very hard to see on a hazy day. It is mostly flat, edged with mangrove swamps, broken here and there with a few coconuts indicating an isolated village. Entrance to the rivers is very easy to miss; in fact after leaving the Morehead in the early morning and knowing it was four hours to the Bensbach we decided to sleep until we turned into the river, leaving instructions to be woken up when the boat turned into the passage. Early morning on these rivers is very beautiful, with the light and shade of departing night and dawning day; and once one turns into the river itself and sails past the mangrove swamps and the nipa palms; the lush river jungle which hangs over the river edge is a miracle of beautiful things. Brown and gold and spotted cuscus feeding on the leaves and fruits; snakes which are equally beautiful if you happen to like them, crawling through the branches after the unfortunate little animals, and the birds swooping backwards and forwards in the beginning of their daily flight pattern. This was something we had left on the Morehead and were hoping to see again on the Bensbach which is so much more isolated and where there is

much more wonderful wild life. We should have turned into the Bensbach about 5 a.m. but about 11 a.m. I woke up, looked at my watch and rushed on deck, and to my horror, we were nearly an international incident. In the early morning fog and the shimmering haze of the bright sun, the Captain had missed the turn and we were nearly in Merauke, Indonesia. Although I am quite sure we would have been welcome and found an orchid lover there, international protocol does not allow unheralded visits and we made a very smart right angle out to the open sea and sailed back to the entrance of the Bensbach.

This is a country of which we know so very little and where there is so much to do. Problems face collectors from the Fly Delta down to the Bensbach River and then up in the far corner to the high mountains of the Hindenburg wall. In the dry season you are faced with problems such as how to get at the trees behind the pit pit swamp on the water's edge: the cliffs in many places are three times higher than a man and very formidable when one tries to climb them. Once on top the grass is well over your head and it is more than difficult to reach the forest trees growing on the high ground behind them.

The people are tough and hardy and though their canoes look light and dangerously shallow, they are designed to penetrate as far as possible inside the grassy swamps. We, however, when the water is high enough, use a trawler and when we run out of deep water, go back to the canoes. Collection is difficult in these swamps; if you don't nearly go over your head in mud and have to yell for help, and trip over submerged logs and lengths of spikey lianes; and and there is always the ever present fear that you might step on a crocodile and one never waits to see whether they are good tempered or bad tempered, but usually manage to scramble back into the boat with the speed of light. In perfect honesty I must admit the crocodiles also depart very smartly if they see or hear you first, and, clumsy bipeds that we are, it is just as well orchids are anchored on to their host tree by their firm roots, otherwise our noisy approach would scare them to death.

Andree Millar searches for the superb forms

This photo of flowers from four different clones of *Dendrobium lasianthera* was taken in the Lac Botanic Gardens orchid house. Because it shows the wide variation possible within a species it symbolises Mrs. Millar's search for the very best forms suitable for horticultural development a project backed by the Papua New Guinea Department of Primary Industry.

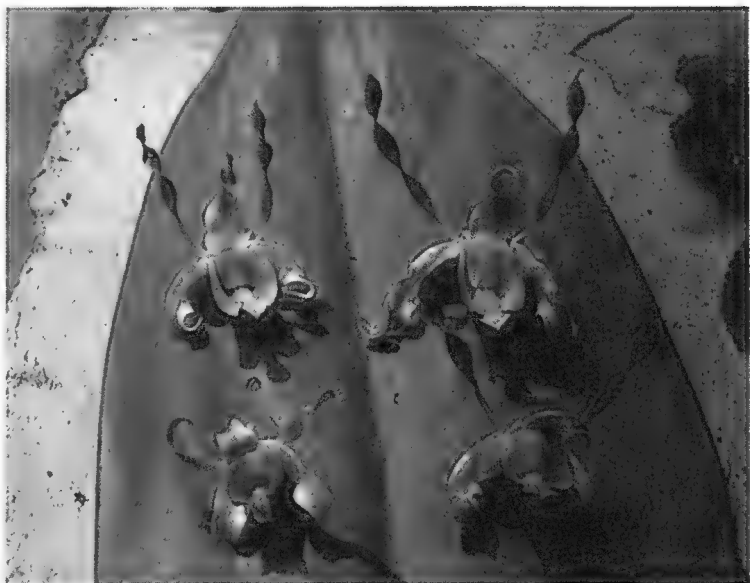
The project involves a breeding programme based on outstanding forms of several genera, also the mericloneing of selected species and hybrids.

D. lasianthera was first described by the Dutch botanist J. J. Smith from forms west of the Bensbach River, in what was then Dutch New Guinea, now known as West Irian.

It was discovered independently on the the Sepik River by Captain Neptune Blood while on patrol behind Japanese lines during the war. Captain Blood sent specimens to the Rev. H. Rupp who considered it a new species and named it *D. ostrinoglossum*.

In the distance it appears to have a bluish tinge and is often referred to as "The Sepik Blue".

D. lasianthera has already been used in hybridising and many fine forms of these are to be found in North Queensland collections.



Dendrobium discolor was originally discovered by Robert Brown, naturalist on *H.M.S. Investigator*, when Captain Flinders was mapping the Queensland coast during the first circumnavigation of Australia. Brown named it *D. undulatum* but this name had previously been used for another orchid.

Three forms of the species occur in Australia and several in Papua New Guinea. Vegetative growth can be quite large and the need is to develop those which have both compact growth and fine flowers. It requires warm conditions and good light.

Dendrobium discolor is in the *Ceratobium* section of the genus and has hybridised naturally with the *Phalaenanthus* section on quite a large scale. It has also been used extensively for man-made hybrids.

Andree Millar has found astounding variation and eventually improved forms will come from Papua New Guinea.



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The orchids of the Western Province have obviously an affinity with the orchids of West Irian, because after all, they are only divided by a man-made border, but Indonesia as well as Papua New Guinea, still has a mammoth task to find these things and put acceptable botanical names on them, and also bring them into the orbit of the world collector. One of the problems which has become very obvious since I have been trying to build an orchid industry for the people of Papua New Guinea, is that variation in the species not only can cause you to lose face with a customer, it can cause you to lose the customer altogether. *Dendrobium discolor* is of course one of the most common orchids in the Western Province and varies in size from 3 cm to 9 cm or more high from the tip of the petals to the bottom of the mentum. You often find both sizes growing side by side on the same tree. Tissue culture is, therefore, going to be the only answer to propagate the most desirable forms and also to safeguard an industry. Customers who see a large flower and get a small one or hoping for an orange-red colour and get a dirty khaki green are apt to be discontented and cannot appreciate the fact that until plants flower we have no idea what the colour or size is going to be.

The *Dendrobium discolor* story is one which I am sure will never be completed while there are jungle plants left in their secure and impenetrable fortress. Once you are sure the last possible variation has been collected, this happens in the next half mile. *Dendrobium nindii* — the former Australian species *Dendrobium toftii* and identical with the Papua New Guinea *Dendrobium ionoglossum*, is another orchid obviously destined to wait until the very best form is found and introduced to tissue culture. This is the usual form, white, untidy petals and sepals and beautiful, large purple labellum. The variation in these plants is even greater than that in *Dendrobium discolor*: the canes vary from 1 metre to 8 metres and the longest flower spike and the brightest colours in the lip are usually lovingly entwined with the longest, sharpest, most unpleasant river-side shrubbery in the whole of the river. Once I found a beautiful all-cream form on the Oriomo River, high up in a wild nutmeg tree. There must be more, for the Western Province never does anything singly, never one of anything; there are millions of forms of *Dendrobium discolor* and *Dendrobium canaliculatum*: billions of ants and wasps and stinging vines and trees.

I cannot believe that nature's prodigality in everything else would be reduced to one cream *Dendrobium nindii*.

Two of the species for which I was looking were *Dendrobium johannis* and *Dendrobium canaliculatum*. That there were variations in our species as compared to the Australian species, I knew very well; just as I knew that there were variations in the Australian species so on my last visit to the Western Province, we went up the Mai Kussa River as far as Buji. We dropped anchor and went ashore to look for this species which we knew had been collected in this area. We knew that there were miles of Melaleuca swamp — Melaleuca is the famous paper bark which is so common in Northern Queensland and is used for lining hanging plant baskets. We followed a track from the beach inland and about a mile later, we came to the swamp, miles and miles of it, from a few inches deep to suddenly well over my knees. In the next half hour I asked myself a dozen times why, in my position of authority, I could not have delegated somebody else; here I was up to my knees in a stinking oily swamp, with vicious red ants half an inch long, biting me in all the places that I could not scratch, my hair full of ants and paper bark and two vile leeches gorging themselves inside my rubber shoes. Everybody else had gone in different directions and here I was, monarch of all I surveyed and the immediate horizon devoid of any contenders for my crown — or anybody to help me collect the plants I wanted.

With botanists, I think it is fair to say that familiarity with Nature's more unpleasant creations, breeds contempt — eventually that is. I would not go so far as to say that I could treat the ants and the leeches with contempt, but at least the element of surprise had gone, and I could pick them off without hysterics.

I had been slogging through the swamp for at least an hour before I found the first beautiful sturdy *Dendrobium johannis*. Once having found the first plant my yell of triumph was immediately answered by others from different quarters indicating that they too had successfully found various orchids and when we compared what we had, the colour varieties were astonishing. We found that they were in all shades of white, yellow and brown, and some even had purple and bronze in the petals. My favourite flower measured 25 mm across and high, which I think is quite good for this orchid, and they are there by the

millions. How far the swamp goes I do not know but when it takes you at least three minutes to haul your foot out of over half a metre of mud, you lose count of time and tend to go by the sun.

Another orchid which I was interested in finding was *Dendrobium canaliculatum*. I have been for some time planning ahead for our own tissue culture programme and collecting species and hybrids which I hope will hybridise with plants like these. I believe that in the new high rise housing developments where conservatories and glass houses will be built on verandahs, the miniature many-flowered orchids will have pride of place and be much in demand. While I think that many people will purchase these species, I think our greatest market will be in the hybrids and it was for this reason that I went looking for *Dendrobium canaliculatum*.

Oddly enough we had to go quite some distance to find this little onion orchid growing in quantity, so that we could collect enough to make comparisons and they were, fortunately, in flower. One was almost pure white with very little colour; another had white, half yellow petals with a deep purple labellum and side lobes, and were much larger than the species which we collected from Rigo in the Central Province, but which, is I think, equally attractive and equally useful in a breeding programme.

Before I leave the *Ceratobium* section, there are two I must mention: *Dendrobium schulleri* which I found in the Morehead River forest and also right up at the top of the May River, a tributary of the mighty Sepik. There has long been a confusion in my mind as to whether *Dendrobium mirbelianum* and *Dendrobium schulleri* are the same thing. There has not been enough collecting done to prove this one way or the other; fifty plants on the Sepik are as full of variations as fifty plants on the May. I think there are so many natural hybrids in these swamps that urgent work is needed to sort them out, and I think this is an immediate job for official orchid research. These swamps, with their dozens of mini-climates caused by the extremes of high and low water, the varying vegetation from mangroves to nipa palms, eucalypts to riverine forest, miles of wild sugar-cane swamp to the equal miles of oil-filmed sludge, can visualise the variation in the multitude of orchid species.

I found a new *Dendrobium* and after studying it I am sure it can only be *Dendrobium*

cochliodes: but what is it doing up the Bensbach River? It is bigger (canes to 3 metres) and flowers three times bigger; and look at that beautiful labellum. It is almost worth investing another hundred dollars in mosquito spray and going back for more.

There were, of course, other orchids in this area, dozens of plants of the beautiful little *Dendrobium rigidum*, with innumerable colour and plant variations, *Luisia* species, and a host of other botanicals.

I have always been interested in the vandaceous of this country and I have been amazed at the wide distribution of the various members of the tribe. *Schoerchis*, *Luisia*, *Pomatocalpa*, *Sarcanthus*, *Trichoglottis*, *Thrixspermum*, *Camarotis*, to name a few. *Vanda hindsii* comes from the foot of the mountains in the top corner of the map. *Arachnis meulleri*, I thought, only belonged in the Central Province, however, I have found it in other places now and also up the Strickland River. A yellow form of *Vanda hindsii*, which I had found only once before in Morobe, was found again in riverine forest on the Bensbach. I think it must be more common on the West Irian side as it was scarce on our side of the border. And I wish them luck in finding it — it is certainly country fit for pigs and crocodiles, but a couple of plants like these would compensate.

One of the exciting finds of my last patrol was a new colour form of *Grammatophyllum papuanum* which I collected in the riverine forest between the rivers. It was grey with dark olive green spots and we found others in a hundred yards radius but all of the normal greenish yellow brown spotted form. Believe me, I brought this honey of a plant into my cabin on the trawler every night; and much to the consternation of the air-crew, it travelled with me in the plane from Daru. I said I'd sit on the floor but no one was going to get a chance to swipe a piece of that plant. We have since flowered it and it came true to form.

The *Bulbophyllum* story is very dear to my heart and will be my pet project this year. There are said to be 569 in the New Guinea region, which includes the island of New Guinea, the Bismark Archipelago and the North Solomons — Bougainville that was. Some may be synonyms: I don't think we have seen or heard of half of them, or the many not yet found. The Western Province has many of the bulbophyllums we know and some I have never seen before and it is com-

non to come to the end of a day, tired, dirty and stinking to high heaven with the mud of the swamps and then suddenly find a little *bulbophyllum*, marching up a branch in full flower like a brood of ducks going home for dinner.

It is hard to give you any conception of the vastness of this great province, of the miles of land so inhospitable that no man lives there and few cross it on hunting trips. It is a rich country with mineral wealth in the far top corner of the province, in the high mountains which begin with the Hindenburg wall and reach back to the fabled Star Mountains. Let me assure you that people do live there but in the villages in scattered areas where the land is dry enough to at least build a house on six foot stilts.

In the swamps and rivers there are riches too, crocodiles — and we lead the world in crocodile farming — and in the rivers a wealth of fish and crustaceans — barramundi, crayfish and prawns. And there are a wealth of orchids too, most of which we have not yet seen, of this I am very sure. I have been several times to this province collecting and botanising; not on the well known trails, but in the swamps between the rivers and on the little creeks that lace the province together. It takes a long time to get anywhere when you are collecting, when you are knee-deep in stinking, clinging mud and fall flat on your face wondering why you did not take up something less exacting such as may be a shop assistant or a nursery governess, but there is always a tree in the near distance which beckons you on; it could hold a new species, perhaps even a new ant plant; *Myrmecodium* or *Hydnophytum*, in which world interest is I am sure now at the highest peak it will ever reach. No day, however tough and hard the going, is without its reward.

I believe there are three areas in the Western Province where research is readily needed and where we, the very few people in Papua New Guinea equipped and anxious to work on the orchids, need all the assistance we can get. One is based on Tabubil in the high mountains, for there I have seen orchids, begonias, ferns and other desirable ornamentals, so many in such a small area that I would not have believed possible. This will be no easy task, everything that nature can devise appears to be against you and most assuredly the survival of these species in these inhospitable mountains will be forever pro-

tected by horrors that only Tarzan and a mad-minded movie producer could possibly imagine.

The second area is Lake Murray, where I believe our research party would make its headquarters, and, from there work down from the Lake through the Herbert to the Strickland River, and from there proceed up the Fly River to Lake Davambu where there is a small airstrip with side strips to Lake Vatava and if possible, deviating on both sides of the Fly up the small creek to Szaga Lake. This is where in 1968 I found my first *Dendrobium canaliculatum* and so began the series of collecting and research forays into the country which is, I believe, the meeting place, the equal home of the Australian and Papua New Guinea species. I believe this should provide us with the answer to the many questions of our final distribution and nomenclature problems.

The third area is, of course, the Bensbach River and the stretch of borderland on both sides of Papua New Guinea and West Irian. It is my belief that there are *Ceratobium* *Dendrobiums* in this hostile stretch of swamps and riverine forest which no man has seen. It is not a job which could be undertaken by spasmodic visits of a relatively small area. It is a project which must be planned in the interest of orchidology, by scientists from both countries which share the dismal borderland and it can only be done with the backing of the scientific brains and support of the world. Money is a crude word to insert into a paper about anything as beautiful as orchids and even the smallest of orchids is exquisitely made. Nevertheless, the day has gone, thankfully I must say, when the people who live in these areas where life is as hard and as earnest as this, will accept a handful of coloured beads for a day's work, knowing full well that they will do the hardest and most uncomfortable part because they are mentally and physically equipped to do so; while the glamorous visitor from another land, with his papers and pencils, and bottles of spirits and magnifying glasses, is earning more than just a pittance as the just reward for his work.

There is a whole new world of orchids both species and natural hybrids here behind an incredibly cruel border erected by nature to keep man out; if we need these, and science does, this is a job not just for me but for the scientists of the world. The hardships will be great but the rewards will be beyond price.

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CULTURE OF CYMBIDIUMS

DR. JULIAN COKER

Cymbidiums are an extremely hardy genus and will stand considerable variations in growing conditions. However, for best results the following limits are recommended. Temperatures should be between 40°F-85°F, although they will withstand from about freezing to 100°F for short periods. Growth at these extremes is markedly affected, so they are best avoided, if possible.

Humidity should be about 50 per cent. Light can be up to 8,000 foot candles to the leaves, and 3-4,000 foot candles to the flowers, provided ventilation is adequate, to ensure a cooling effect over the leaves. It is advisable to give them maximum light in the summer, as this facilitates, amongst other things, spike formation.

Ventilation is also most important, as it provides, transfer of gases over the leaves and through the compost, a cooling effect on the leaves, and also a drying effect, important in both summer and winter.

With water, the roots should be kept moist at all times, but never sodden, and here the compost is most important. You should aim at one saturation watering every 7 days all the year around, to thoroughly wet the compost and remove excess fertilizer and waste products. Through the summer watering may be required every day, and is best done at dusk, as this will facilitate cooling, and hence spike initiation. If done in the morning, or early afternoon, it may leave water in the axils of the leaves, and with a hot sun, may result in rotting out of the new leads. Never water in the middle of hot days. During spring and autumn, watering will decrease, to 3-4-5 days apart, and may be done in the morning, whilst in the winter it may only be required every 7-14 days, depending on pot size, and weather conditions. With the colder weather, try to water on the warmer days, and water early, so the parts of the plant above the compost have a chance to dry out before night, as moist, poorly ventilated areas are havens for the destructive rots.

Feeding is something growers must work out for themselves. However, I suggest the following points be given consideration, in selecting your own particular programme.

Cymbidiums are heavy feeders, and at their growing peak from November to March,

Dr. Julian Coker is one of the founders of the Maroondah Orchid Society, which in its first two months attained a membership of over 200 enthusiasts, mainly from the fast growing eastern suburbs of Melbourne. These cultural notes are from a talk by Dr. Coker at the second meeting of the new society as published in Maroondah Orchid Society's newsy Bulletin.

when the light intensity is high, can absorb about 1 lb. per 100 gallons per two weeks. This is roughly about half the recommended rate of the commercially available fertilizers. As the light intensity decreases, and temperature falls, the plant is less able to utilize the food, so that by winter, about one-quarter to one-eighth of this concentration is sufficient. Small seedlings require about half these concentrations the year round. The plants need higher nitrogen from September to February (N.P.K. 18:18:18), to aid vegetative growth, and alternate feedings of higher phosphate and potash (N.P.K. 10:30:20) if they are flowering, from February on. Feeding may be given in a lump sum every two weeks, or in increments adding up to this amount more frequently, and I prefer this latter method.

However note:

1. never fertilize to a dry compost,
2. flush out as mentioned before, every 7-10 days, to prevent build up,
3. if x amount of fertilizer gives y growth, 2x will not necessarily give 2y; instead it may burn the roots, so hasten slowly with fertilizer concentration, until the optimum is found. There are four general types available.

(1) Short acting commercially prepared inorganic, e.g. aquasol, nitrophoska. Being inorganic, this with a fairly inert compost, will give excellent growth without compost breakdown.

(2) Short acting organic, e.g. nitrosol, fish emulsion — again very good results can be obtained, but especially with a compost that is liable to breakdown, this will encourage bacterial action, and composts tend to last for shorter times. They do, however, have the dubious benefits of unspecified growth factors?

(3) Slow release inorganic, e.g. osmocote, magamp. Experiment has shown that all

plants grow better if given low concentration continuous feeding and these fertilizers make this possible. I have found the nine-month release form of osmocote at one hand full per 10" pot gives excellent results.

(4) Bulk supplies of inorganic, e.g. ammonium nitrate, potassium nitrate, etc., by the 120 lb. bag. As your collection grows, fertilizing becomes a very expensive item, and the same results can be obtained by mixing your own, and at only a fraction of the cost. Also, there is the opportunity for infinite variation. However, for this, some understanding of N.P.K. and the actual amount you are using is required. I use slow release osmocote with combinations of ammonium nitrate, potassium nitrate, Pivotiz and muriate of potash (potassium chloride) to adjust NPK throughout the year. Magnesium sulphate is added from October to February as is indole acetic acid to aid new root growth. Occasionally a watering of trace elements is given to ensure that no deficiencies have occurred; although these are usually present in sufficient quantities as impurities in the chemicals mentioned above.

Remember feeding requires an individual approach, as does your compost composition, and should be tailored to the particular way in which you conduct your own culture.

Some growers build a wall of mystery around their orchid composts, however, remember when formulating your own, that a compost can be prepared from anything that will provide these three basic criteria:

Support the plant.

Provide a micro environment for the roots, to allow adequate humidity, aeration, and water and nutrient availability.

Should be composed of material that will preferably not break down over a period of 2-3 years.

There are some composts commercially available that are poorly formulated, and should be avoided, and I would suggest you start with a combination of coarse sand, pine bark, peat moss and peanut shells and/or chopped dry bracken fern, and modify from there to suit your particular needs. In wet climates mixes should be more open so they can dry out quickly.

Coarse sand or fine gravel is inert, and keeps the mix open, and because of its weight keeps the pot stable. Medium fine pine bark

is relatively cheap, and easy to obtain, although it is best slowly weathered. Naturally for 3-6 months, or rapidly weathered, by soaking in garden lime, and then boiling to sterilize it, and remove its phenolic substances. Peat moss is added for its water holding capacity, and peanut shells and bracken keep the mix open, and may provide organic material and mycorrhiza, beneficial to the plant.

Rice hulls are inert, but tend to sour the mix. Styrene foam in place of sand, lightens the mix, but is a curse to dispose of, especially if you use your old mix on the garden, and deciduous tree leaves, e.g. oak, break down too quickly, and make the mix muddy. Charcoal can also be a useful additive and should be considered.

If you only have a few cymbidiums, I suggest you purchase your mix ready prepared from your orchid nursery, but as time passes, and your collection grows, consider preparing your own.

Again because of climatic conditions, potting advice cannot be used from other States. With seedlings, repotting should be done three monthly, from 2" - 2½" - 3" pots, then six monthly to 4" - 5" pots and then yearly to 6" - 7" pots. With larger pot sizes every two to three years is adequate, and desirable, to obtain best flowering. The size of pot depends entirely on the root system and not the leaf growth.

Cymbidiums are fairly rampant growers, with a strong root system, and in a relatively short time will fill their container. As a general rule put them in the smallest pot that will comfortably accept them. Potting is best done after flowering, as is breaking up, as after a period of recovery they have the whole growing season ahead of them. Try to avoid breaking up in the summer and later, as they can become very dehydrated during the hot weather until their root system re-establishes, and in the autumn their growth has slowed. The potting of small plants may be done at any time by carefully shaking the compost away, and then gently shaking the roots apart. From March to September it may be best to just pot on, in which case the plant is knocked out of a small pot, placed in a larger one, and the compost added around the sides.

Black plastic pots should be the only ones used, and it is best to punch extra holes in the bottom, to ensure adequate water drainage. Don't use crocks as they occupy valuable root space. Instead place a little dry

bracken over the holes to prevent the compost falling through, and fill the rest of the pot with compost and roots.

The pseudobulbs should just have their bases covered, and it is best to leave a rim of about $\frac{1}{2}$ " - 1" at the top of the pot, to prevent the compost from washing out. A special exception here are reds, which have a tendency to throw their new leads horizontally, and these should be planted as high as possible, otherwise you will find leads and spikes growing down into the compost.

When dividing a plant, try to avoid breaking it into anything smaller than 3-4 pseudobulb divisions, as flowering may be lost for a number of years if the divisions are smaller. Healthy back bulbs can be planted in sand or mix, and will begin new plants. These take three to five years to flower. When they are broken off, take the rhizome and pseudobulb, as the new growth usually comes from the very lowest part of the pseudobulb.

Garden culture is also possible. A well drained, sunny position, free from frosts should be chosen, and compost may be added to the soil. The main hazards are snails, aphids and the elements, but with a little care the rewards are worthwhile.

Cymbidiums have a main flowering season extending from May to December, with a peak from August to October, and occasionally a plant will flower in the months not mentioned, although when this occurs the flowers are usually of poor quality. Each individual plant has a natural flowering time determined by its genetic inheritance derived from the species that occurred in its breeding. Best results may be obtained when it flowers at this time, and if for some reason it flowers earlier or later, results are generally inferior. Growing conditions can also vary flowering time a little, with heat being most important in making it earlier, but beware, as excessive forcing with heat may lead to bud drop.

The spikes are initiated in the summer months and require nights below 55°F for this to occur. Then from February to May they begin to develop. Growth is not always uniform, often appearing to occur in stops and starts. The early flowering varieties tend to grow rapidly once development of the spike begins, with no rest period, whilst later varieties may show their spikes early, stop growth for a time, and then make a final spurt later.

Initially it is not easy to distinguish between a spike and a vegetative growth, although

usually if the leaf base is split, it is a spike. By the time it has reached $\frac{1}{2}$ " - 1" in length, the spike is fatter and more rounded, and after this its identity is obvious.

As the spike continues to elongate it is sheathed by scale leaves until it reaches about half its final length, then the buds break through and continue their development unprotected. From breaking through to flower opening is usually about 8-10 weeks. The spike should be left on the plant after the last flower has opened for about 10 days, as the flowers continue to grow for a few days, and attain their final colour and form. It is then best to remove the spike, as it will last almost as long in a vase, and then does not inhibit the plant from preparing for the next season's flowering. A spike may be picked before the last buds open, but when open these will be of inferior quality. To prolong the life of a cut spike, remove the bottom 1-2 cm each 1-2 weeks, to give a fresh area for water absorption.

Flower spikes may occur from the new lead and develop as the lead develops into a pseudo bulb, or they may develop from mature pseudo bulbs, and hybridising between these two types may be one cause for shy flowering.

To obtain the best results in colour, special attention should be paid to incident light after the buds have left the sheath. Albinos don't need shading beyond what is required to prevent burning, but the others usually do, although the green albinos tend to have more yellow if the incident light is high.

Normal coloured whites and greens should have the buds, but not the plants shaded, to give best colour clarity. High intensities tend to add pink to the exposed parts of the flower, and with greens there is a tendency for a more yellow green to result. Reds, pinks and yellows should be given maximum safe intensity until the first buds open, and then shaded, as continued high intensities after the flowers have opened, often causes the colours to fade.

Staking is also important, and should aid the spike in attaining its natural contour. Cane or reeds suffice, and the spike may have multiple ties during its development, using plastic covered wire, but for showing, only one tie is allowed, and this must be below the first flower. Always remove the stakes after flowering, as they are a danger to the unsuspecting eye if left in the pots.

Cymbidiums are prone to a number of diseases and pests, the most serious of which

is virus.

Fortunately there is an evergrowing awareness of the seriousness of virus disease, and most authorities both academic and commercial, together with informed amateur growers, advocate that all efforts should be made to completely eradicate it. It is a widespread incurable disease, which spreads insidiously through a collection. Spread most commonly occurs by contact of clean, with infected plants, and through contact with contaminated cutting instruments during harvesting of flowers, and repotting. An understanding of this scourge is mandatory from the start, as many infected plants are presented for sale at various times, and the best way to have a clean collection is to start with one, only introduce clean plants, and handle your plants in a way which prevents spread.

Remember it is very destructive and incurable, despite what some older articles say.

The other serious disease is collectively called "the rots" and results from infection by a variety of bacteria and fungi. These are to some degree curable, and work is progressing in this field, but often the plant is lost before the problem is recognised, and it usually occurs in your best orchids.

Other common pests are red spider which can cause severe damage to the backs of the leaves, and the flowers, aphids which damage the flowers and snails and slugs which damage the roots and flowers. Here especially the small bush or garlic snail is implicated. Scale can also be a problem on the leaves and around the leaf bases. Caterpillars, earwigs, slaters, etc., may at times be a problem.

Treatment will be discussed in a later lecture, however, suffice it to say, that modern day pesticides are amongst the most lethal substances known to man, and are just as effective against the user as the pest.

Other damage may result to the flowers from bright sunlight after cold nights, where they develop clawing, "die back" of the tip of the labellum in certain hybrids following very cold nights, and spotting, where water is left on the flowers during cold days and nights.

Care must also be taken with pesticides on flowers. Concentrates, where organic solvents are used, should be totally avoided.

Flowers and leaves can be sunburned, damaged by excessive fertilizer, and pollination removal of the anther cap and injury to the labellum leads to a red pigmentation of the labellum, referred to as "bleed lip". This

interestingly enough does not occur in albinos which cannot produce the red pigment.

Orchids are now a very large industry, and so in starting, and adding to your collection, endeavour to learn who are the reliable sources of supply, and who provides good quality, disease free plants at a reasonable price. Orchids would never have progressed to where they are today without the commercial grower, and there are many genuine people amongst their ranks. However, in this high pressure advertising world beware of elaborate displays, and grandiose claims of super this and that, together with their inflated prices. Some are genuine, and reasonable in price — remembering that it takes on the average seven years from fertilization to flowering, and only about 1 in 500 or 1,000 seedlings produce a really good flower — but others would find it very difficult, if not impossible, to justify their claims or prices in informed circles. In time you will learn who's who, and it is your responsibility to find who you can rely on to give you a genuine deal. There are many features to consider in forming a collection, most important being colour and flowering time, and a suggested list is included later. In your selection you may purchase flowering sized plants and results will be immediate. Naturally these cost the most, so if you can wait, a mericlone or back bulb will give you the same plant, but take 3-4 years to flower. If you have a few flowering plants, you can upgrade your collection, and extend the colour range and flowering time by purchasing or swapping a few of these each year. Also all collectors should obtain a few seedlings each year, as the thrill of the first flowering is the acme of orchid growing, and one day you may flower your own show winner.

Once you have a small collection you can commence showing. Perhaps initially at monthly meetings, and later at the Winter and Spring Shows. Whilst your collection is small you can exhibit in the club stand, but as the collection grows you can have a stand of your own, and one day, if you grow your plants well enough you may win a ribbon, or ultimately the gold plaque for the champion orchid of the show. It is never too early or too late to learn something that will enable you to grow your plants better.

Orchids lend themselves to photography although some experimenting will be required for best results. A flash and coloured back-drop are essential for best results.

Orchid growing so often becomes an obsession that takes hold of you, and tends to control you, rather than the opposite. Endeavour to never lose the thrill and enjoyment you derived from your first plants.

Suggested varieties to start a collection:

EARLY

Lustrous 'Betty'	—	pink
Angelica 'Clear Yellow'	—	yellow
Lunagrad 'Elanora'	—	green
Highlander 'December Charm'	—	green
Pinafore 'Comet'	—	deep pink miniature
Peter Pan 'Greensleeves'	—	green miniature
Wyngas	—	albino green & yellow

Alnwick Castle

'Brentwood'	—	yellow
Warrinya 'Parisienne'	—	pink

MID SEASON

Rosarita's	—	pink
Anita's	—	various colours
San Francisco 'The Beat'	—	polychrome
Burgundian Chateau	—	orange brown
Sensations	—	reds
Wyatongs	—	oranges
Joyce Duncans	—	greens
Lagoon 'Meta'	—	pure white
Wallara's	—	yellow

Valya Craig 'Sutherland' or 'Judy'

Western Rose 'Perfection'	—	yellow
Jungfrau 'Dos Pueblos'	—	blush pink
Beacon Fire 'Cecil Park'	—	pure white
Highland Mists	—	miniature red
Barcelona 'Magic Wand'	—	white
Cachuma Painted Cave	—	green
	—	pink

LATE

Hawtescense F.C.C.	—	yellow
Etta Barlow 'Chandos'	—	Ice green to white
Madrid 'Forest King'	—	green
Gwenneth Reid's	—	yellow or green
Burgundian 'Sydney'	—	polychrome
Sabre Dance 'War Lord' or 'Kensington'	—	reds

ORCHID SOCIETY OF S.E. ASIA

Fellowship Awards

A pleasing feature of the Ninth World Orchid Conference was the award of Fellowship Medals by the O.A. of S.E. Asia to Prof. Rapee Sagarik of Thailand, Mr. Gordon Dillon of the U.S.A. and Dr. Yeoh Bok Choon of Malaysia for their outstanding contributions to orchidology.

Mr. Gordon Winston Dillon was secretary of the American Orchid Society from 1948 until his retirement in 1977. He edited the "A.O.S. Bulletin" for nearly 30 years. During his office the Society grew from less than 4,000 members to 20,000. Mr. Dillon achieved fame as a botanical illustrator and prolific writer on orchids. He suggested, organised, and chaired the first World Orchid Conference at St. Louis, Missouri, in 1954, and served as Programme Chairman for the

Second to Seventh Conferences. He has been very active in promoting orchid research.

Mr. Dillon plans an active retirement. All Australians will join in wishing him many more interesting and enjoyable years.

Professor Rapee Sagarik is at present Rector of Kasetsart University after an active academic career during which he was largely responsible for the establishment of the Thai orchid industry. This is reputed to be worth \$US10 million a year in foreign exchange to the Thai economy, making Thailand the biggest exporter of flowers and plants in Asia. He is well known for important work on hybridisation and for his authorship. Professor Rapee Sagarik has been awarded many honours and high offices in his country.

As Chairman of the Ninth W.O.C. his inspiration and hard work contributed substantially to its great success.

Dr. Yeoh Bok Choon has been growing orchids for over 50 years and has done much to popularise them in Malaysia and Singapore. He is a past president of the O.S. of S.E. Asia and has been editor of the *Malayan Orchid Review* for many years. He has written widely on orchids and is a world authority on the genus *Spathoglottis*.

The deciduous *Lycastes*

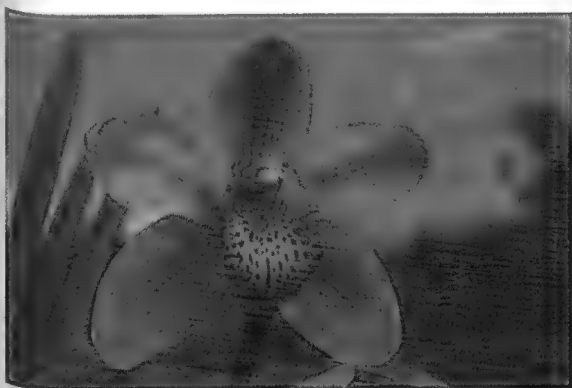
S. WALDIE

L. aromatica is one of the group of deciduous yellow lycastes which includes *L. crinita*, *L. cruenta* and *L. deppei*. These plants make vigorous growth during the tropical hot rainy season, followed by a 2-5 month resting period in the dry cooler months when they lose their leaves. In the early Spring, the flowers and new vegetative growths appear from the base of the mature bulbs. It is necessary to keep the plants dry at this time since the presence of water will result in the damping off of the new shoots with the loss of flowers and next year's growths.

Although plants have been collected in Mexico down to 150 feet elevations, in most areas of Central America they are found on trees or rocks near streams or rivers at altitudes up to 6,000 feet.

The pseudobulbs grow up to four inches high and 2½ inches wide and have sharp dangerous spikes ¼ inch long at the top. The petals and sepals are a light yellow-green about 2½ inches across, and the labellum is mainly bright yellow-orange with light red spots deep in the throat.

Two new
early flowering
tetraploid clones



Cymbidium Sleeping Dream 'Sun Goddess'

These two fine clones flowered in June and July this year for Valley Orchids of Adelaide. They demonstrate today's high standard in tetraploid cymbidiums. A study of their breeding can be of value to the seedling buyer. The Sleeping Dream grex was registered in 1973 by Valley Orchids and hybridised by the late Dr. Vandyke. The grex C. Dawns Delight was registered in July 1978.

Both are ninth generation and 4N tetraploids. Qualitatively, given eleven to thirteen flowers on a spike and maximum points for size, 'Sun Goddess' might rate a HCC and 'Masterpiece' a FCC. Winter flowering clones of this quality have to date been extremely rare.

Note the wide and even segments of 'Masterpiece' and their rounded ends, particularly the lateral sepals. Also the harmony of labellum size relative to the tepals. Colour is even in the tepals and dramatic in the lip.

Although a fine orchid 'Sun Goddess' does not have the width of segments, notably in the petals. The lip is narrow relative to the rest of the flower, and while its colour is splendid, it has a slight tendency to furl. Colour is uneven in the tepals.

While 'Sun Goddess' is a very good orchid many would regard 'Masterpiece' as superb. What then are the factors in breeding which might make this different?

In both lines *C. insigne* is dominant. It has been used nine times in the ancestry of *C. Dawns Delight* and ten times in that of *C. Sleeping Dream*. This indicates genes capable of inducing flowers of good shape, size, and colour, and which will be long lasting with many to the spike.



Cymbidium Dawns Delight 'Masterpiece'

C. Sleeping Dream has seven infusions of *C. lowianum* thus increasing the likelihood of heavy spiking; *C. Dawns Delight* has only two.

C. Sleeping Dream has *C. hookerianum* (syn. *C. grandiflorum*) in its ancestry five times which would account for its large size; *C. Dawns Delight* uses this species only twice.

Both are strong with the influence of *C. eburneum* and this would have helped shape and texture.

Other species appear only once or twice, and the influential *C. Alexanderi* occurs twice in *C. Sleeping Dream* and three times in *Dawns Delight*. To tabulate:

	SD	DD
<i>C. eburneum</i>	4	5
<i>C. lowianum</i>	7	2
<i>C. tracyanum</i>	1	1
<i>C. parishii</i> v. <i>sanderæ</i>	1	1
<i>C. vansonii</i>	2	1
<i>C. insigne</i>	10	9
<i>C. hookerianum</i> (syn. <i>C. grandiflorum</i>)	5	2
<i>C. x cooperi</i> (Nat. hybrid)	1	
<i>C. erythrostylum</i>		1

The significant difference is that *C. Dawns Delight* has *C. erythrostylum* in its pedigree. This species had only been used occasionally up to the time Sanders crossed it with *C. Edward Marshall* to produce *C. Early Bird* in 1946, of which the clone 'Pacific' proved a tetraploid.

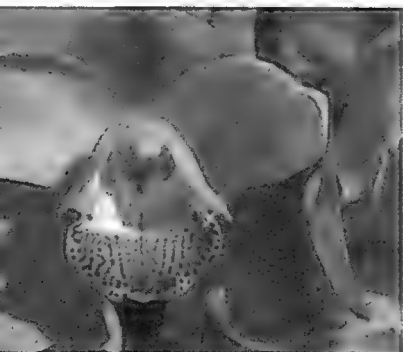
C. Dawns Delight has one parent *C. Janine Imperial* which is four generations away from a *C. erythrostylum* cross made in 1915, also by Sanders. This would account for the roundness of its petals and sepals. *C. Alexanderi* was used in the next generation, and in subsequent generations the faults of *C. erythrostylum*, such as folding and twisted petals, have been eliminated and its good qualities retained. Remember however that there will always be some clones in a cross where the undesirable points of some ancestors will be noticeable, but in good crosses this proportion will be small.

Well bred seedlings with *C. erythrostylum* three or more generations back would appear to be ones to buy. That major nurseries think so too is indicated by the fact that *C. Stanley Fouraker* (*Alexanderi* x *Early Bird*) has been used as a parent in 52 grexes registered in 1961 to 1975, and *C. Fred Stewart* (*Early Bird* x *Balkis*) 30 times in the five years 1971 to 1975.

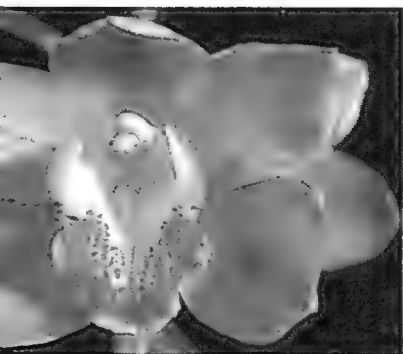
Photos Courtesy Valley Orchids

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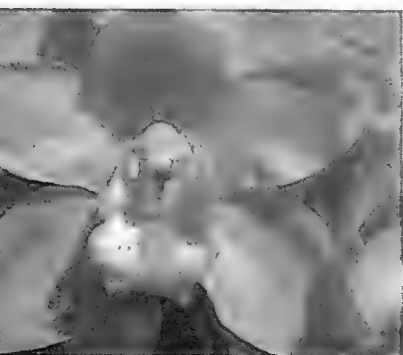
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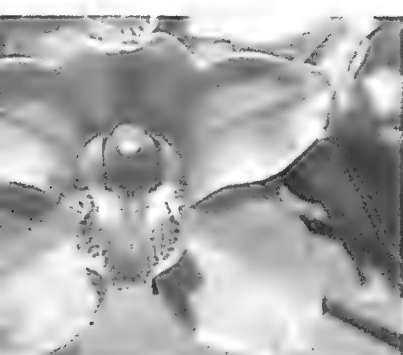
OWNS DELIGHT 'MASTERPIECE' (4N)



COLDSTREAM 'INFERNO'



SLEEPING BEAUTY 'TETRA MIST' (4N)



LEY FLOWER 'CHERRY RIPE' (4N)



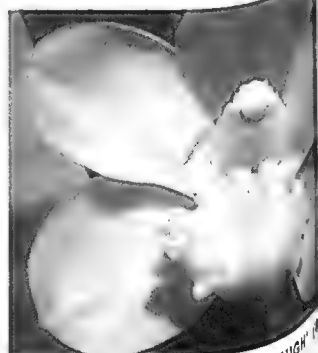
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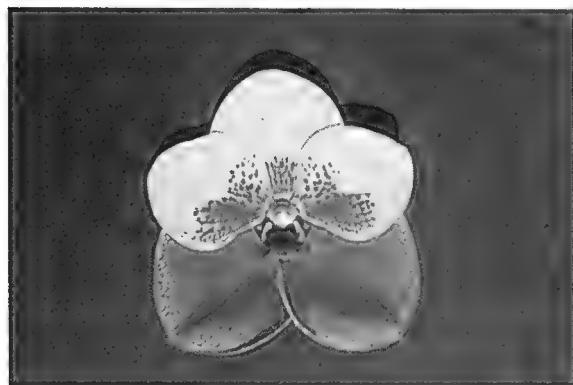
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The human, the outstanding and the bountiful



The human

"I think this is the finest photo I took during the entire Ninth World Orchid Conference tour. It symbolises the friendly, happy, Thai people, the fascination of the floating market, and, of course, the glory of orchids. The lass was selling potted plants and bunches of cut flowers for around \$1.00 Australian. The plants appear to be *Dendrobium Pompadour* (red), *D. Jaquelyn Thomas* (white), and *D. Caesar* (white and pink), all grown by the hectare in Thailand nurseries". — Ronald Kerr.



The outstanding

Vanda Hilo Sand 'Orchidworld', HCC/QOS

V. Hilo Sand is a fifth generation hybrid and the breeding line shows that *V. sanderana* has been used six times, *V. coerulea* and *V. dearei* once each. Thus it is 75 per cent *V. sanderana*.

The Award was made to Mr. Barry Paget of Orchidworld, Capalaba, Queensland, who is one of Australia's leading growers of vandaceous orchids.

Plants from Thailand,
Queensland and Tasmania
illustrate the wide
influence of orchids.



The bountiful

Gomesa planifolia, CCC/TOS

Writes Chris Nicholas, our Tasmanian Associate Editor, "This flowering of *Gomesa planifolia* gained Phyllis and myself a Cultural Certificate last year with 29 spikes and 997 flowers. I can assure you its quite a lot of fun counting them. We cut the flower spikes off, lined them up on the table, and then started. Should have done a recount to try and find 1,000 but decided it was too much like hard work".

G. planifolia comes from Brazil and is related to the genus *Oncidium*. The flowers are about 2 cm long with joined sepals behind the lip, and with wavy segments. They are pleasantly scented.

Chris suggests: "Mount your *Gomesa* on a piece of treefern, hang it in a bright spot away from full sun, and give plenty of water and weak fertiliser during the growing season. Keep it warm and slightly moist after flowering until new growth commences and you will be rewarded with a highly floriferous well behaved specimen plant which does not over-run the glasshouse".

Cymbidium Growers in Southern Queensland

PHYLLIS COTTON

Mr. John Gallagher of Bleasby Road, Eight Mile Plains, is well known for his beautifully flowered cymbidiums. Most seasons he gets good flowering but says that a season can be below average occasionally.

He thinks that a good potting medium is very important and his choice is for *aged* peanut shells, peat moss, and tan bark. Proportions are five parts of peanut shells, one of peat, and two of tan bark. He allows these to mature for about six months. The heap should be kept moist to speed up the aging of the peanut shells.

John likes plastic pots, they are cheaper and do not build up salts. They do not break or blow over.

The plants are placed on benches about 100 cm from the ground, with a space about the size of a plant between each. This ensures very necessary extra air circulation around them in extremely hot weather. Shadecloth and gauze are used in different sections to provide shade of 32 per cent and 45 per cent.

Repotting must be at the right time, depending on the specific plant but generally after flowering. This way, too, plants don't have to be repotted all at the one time.

John fertilizes heavily as soon as the new growth starts, thereby pushing it to the maximum. He prefers Fish Emulsion because it does not burn the roots, but says that any similar fertiliser with high nitrogen content could do. As soon as spikes appear he switches to a fertilizer with low nitrogen and high potash content.

Town water, which is rather hard in Brisbane, is used, but because of business commitments John cannot always water to a programme. He likes to water in the evenings on the hot days, and then usually mists in the mornings.

The area is subject to frosts at times so there is occasional bud drop. When possible the best of the plants are brought in under cover on frosty nights. It is essential to bring plants in under cover as the buds begin to open, particularly the pastel shades. The reds and yellows can take a little more light. Extra care is necessary at this stage to prevent damage by slugs and snails.

Mr. Hubert Welles of Pine Mountain Road, Mt. Gravatt, grows his cymbidiums on

wooden benches about 45 cm above the ground, and under 30 per cent shade.

His potting medium is four parts pine bark, one part coarse river sand, one part peat moss, and one part Isolite. He fertilizes every seven to eight days with Q4 Top Dressing and/or Garden Gold, but discontinues as soon as the buds begin to appear.

Regular watering is a must and after a hot day must be done in the cool of the night.

When buds show signs of maturity the plants are brought in under cover and receive additional shade according to the colour of the blooms.

He uses black plastic bucket pots for easier handling and lower cost, repotting immediately after flowering. Adequate spacing of plants for good air circulation is a must.

My husband and I live at Camp Hill. We are having very good results by using a compost consisting of equal parts peat moss, gravel, radiata pine bark, charcoal and buzzer chips.

When potting we add Magamp and a small amount of Hoof and Horn under the roots. They are given an occasional foliar feed of Aquasol, Fish Emulsion or Maxicrop during the growing season.

Our plants are growing in a shadehouse with fibreglass walls as a windbreak and a covering of 52 per cent shadecloth. They are taken into a glasshouse when buds are emerging from the sheath.

Lyn and Lee Williams have shown by a colour illustration in the December, 1977 issue of "A.O.R." that they know how to grow cymbidiums. I think they grow them very well indeed. Lyn considers plenty of sunlight a must, with no more than 50 per cent shade and no less than 30 per cent. A must is watering in late afternoons from December until January, except on rainy days.

They fertilize from the time the plant is repotted right up to the time they spike and even after. The nitrogen content of the fertilizer must be lowered in the later stages.

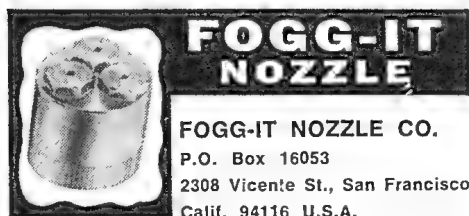
Plants grow in a mix of pine bark, hardwood chips, peanut shells, peat moss, styrene granules and charcoal. Fines are sieved out, and some blood and bone, dolomite and superphosphate added.

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some of them produce blooms as good as any of the southern growers.

Gordon Bloodworth is one, and here again you can look back to a picture of his beautifully flowered *C. Sweetheart* 'Piquant' in the last December issue.

Toowoomba Orchid Society President, Mr. Nev Douglas, considers air movement, light, fertilizing and watering as major factors for good flowering. He grows his cymbids in pipe frame houses with shading of 30 per cent and 50 per cent and uses an open potting mix. With a two gallon bucket as a measure he makes up four parts of tan bark, two peat moss, two peanut shells, and one each of coarse sand, styrene and rice hulls. To this is added 1 lb. superphosphate, 1½ lb. blood and bone, and two handfuls of Magamp.

Repotting is done after flowering. Plants are watered regularly and fertilized with blue chip, used as a liquid, fortnightly right up to September or until flowers begin to open.

Mr. Douglas has overhead spray watering using synthetic tubing and mitre jets. He considers a shade house essential to produce quality blooms. Plants are brought in under cover as soon as buds look like opening. A single layer of cheesecloth is used to shade the yellows, the whites have a double layer, while the greens need at least three layers. The reds are not covered with this extra shading because full light is necessary so that they can develop the required intense colour.

Mr. G. Vettiger, of West Street, Toowoomba, also feels that light, air movement, fertilizing, and watering are the main requirements in order to get optimum flowering of cymbidiums in Queensland.

His potting compost and conditions are much the same as Nev Douglas, except that he prefers to use Nitrosal and Field Pack as his fertilizers.

75 Arrol St., Camp Hill, Qld. 4152

THAILAND HONOURS PROF. HOLTUM

Professor R. E. Holtum is well known for his great work on Malayan orchids which is Volume I of *Flora of Malaya*. He was Professor of Botany at the University of Malaya, and Director of the Singapore Botanic Gardens at a time when very important work on the hybridising of orchids was in progress. Since his retirement Professor Holtum has written extensively on orchids and shown an active interest in their culture. He attended the Ninth W.O.C. where the Thailand Orchid Society presented him with an engraved plaque in appreciation of his work.

Gold Coast Conservation Project

The Queensland National Trust has sent a letter of thanks to the Gold Coast Orchid Society for their work in planting the first instalment of native orchids in the Currumbin Trust Reserve. Another planting is to take place early this Spring.

Plants of as many native species as possible are required and other orchid societies, and individual growers, are invited to contribute. If necessary they can be sent freight on because members have been generous in contributing money for the project. However, by forwarding plants freight paid, more money will be available for other aspects of the programme.

The management and staff of the Currumbin Bird Sanctuary Trust is giving every assistance. The Trust has a team of gardeners to water and service the plants. These are being established in rain and other forests, on rocks, and along waterways, all of which will be fenced in and protected.

Members making substantial cash donations include Miss K. Dobby, Mr. and Mrs. A. Hoskin and Mrs. E. Black. Other members such as Messrs. C. Stark, P. Cole and J. W. Bailes, have made parts of their bush houses available as holding areas for donated plants.

The Gold Coast folk are determined to establish such a Native Orchid Conservation area as will delight all nature lovers. Got any plants you can help them with?

Adelaide Orchids New Catalogue

The maturity of a nursery can be gauged from a catalogue. And its new 1978 catalogue leaves no doubt whatever about the maturity of Adelaide Orchids Pty. Ltd., of O'Halloran Hill, South Australia. Anyone not knowing this establishment can tell from the catalogue that it is of world standard in range and quality of offerings.

The range includes standard cymbidiums, miniature cymbidiums, in seedlings, meristems, and flasks. Also colchicine treated flasks.

The miniature seedlings offered indicate that in this field Adelaide Orchids are in the forefront of world development.

A range of other genera is also offered, a few only in each genus but all superb quality. Supplementary lists covering a wider range are sent out every two months by the nursery.

In the 24 quarto pages there are 56 colour illustrations, which convey the beauty of the flowers extremely well. The print is quite sharp and the typography makes for very easy reading.

You can obtain a copy by writing to Adelaide Orchids Pty. Ltd., Box 1, O'Halloran Hills, S.A. 5158, Australia.

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Growing Cymbidiums on Tasmania's North West Coast

BARRY J. DUDMAN

The North-West Coastal area of Tasmania is an ideal area to grow Cymbidium orchids. It has an average temperature between 5°C (40°F) and 25°C (76°F) and an average rainfall of about 1,000 mm (40"). During the summer months we gain the advantage of afternoon sea breezes which keeps the temperature down.

Then in the winter at my location near the sea, and also near the Cam River; I get between five and fifteen frosts. Under half of these frosts go through the shade cloth onto the plants. I protect the bushhouse plants by covering them with brown paper thus forming a blanket over them. In the flowering house on the colder nights a small fan keeps the air moving and eliminates plant damage. Locations inland and in valleys receive greater temperature extremes and cultural adjustments have to be made.

My introduction to Cymbidiums came about 1960 with a gift of a few plants which required repotting. Then came a few years of trial and error culture; glasshouses proved unsuitable with poor flowering results. Various compost ingredients were tried until I found the mixture suiting my conditions.

In 1970 I moved to my present address and built two orchid houses. The first was a 7 m x 7 m G.I. pipe frame with 52 per cent shade cloth on the roof and north and east sides. The south end was protected by a glasshouse and the west side with PVC sheets. The other house was the same size and same construction with 52° shade cloth as the roof. The east, north and above 1 m of west side were wooden slats about 20 cm apart. The southern end being protected by a potting shed and a lattice fence with clematis over it.

The benches are of wire mesh construction on concrete and pipe supports and between 45 cm and 75 cm above the sawdust floor.

These houses are situated on the easterly side of the property on a rise which slopes down to the north and the sea, giving me full advantage of the sunlight from early morning to sunset.

Plastic pots are used; and because our plants are robust with generally large pseudo-bulbs, we use mainly 25 cm and 30 cm sizes. Repotting is usually done every two to three years and in October and November after

flowering. For the late flowering plants repotting into December often results in lack of spikes in the coming season, so autumn repotting is preferred.

Looking at compost I required ingredients that were available locally, and did not break-down rapidly, while providing food value to the plants. Here on the North West Coast we have ample supplies of natural ingredients which I can obtain within 50 km of my home. My compost mix is as follows:

Four parts leaf humus, comprising myrtle (*Nothofagus cunninghamii*) she oak (*Casuarina* sp.), mixed bush humus (*Eucalyptus*, *Acacia*, etc.); 3 parts pine bark (*Pinus radiata*); 2 parts coarse river sand; ½ part charcoal; ½ part leafy seaweed (washed or left to stand for while); To this mix I add blood and bone, fowl manure and dolomite lime.

For my own convenience I have seven compost bins in which I keep the compost material. Then, when on bush outings I endeavour to maintain full bins on hand, and in another large bin I have mixed compost ready to use. I like to have compost collected and mixed in late Autumn and early Winter ready for Spring repotting, then have enough stored in the bins to mix up later to enable completion of repotting programme.

About mid October I commence a fertilising program with Formula 20, the root hormone, to encourage a vigorous, strong root growth. Then progress onto high nitrogen fertilisers such as fowl manure, Aquasol, Fish Emulsion, etc. at about fortnightly intervals to obtain maximum growth. The feeding of plants ceases with the cooler Autumn weather during March (depending on the season). The plants in spike are given "Blossom Booster".

My cymbidiums are moved under permanent shelter of PVC houses to flower (just before buds appear out of the sheath) because the blooms would be damaged if left exposed to our cold wet months of Winter. With our weather I find the spikes usually appear after a cold spell in January, and our early varieties flower in late June to July. The flush flowering for me is October to mid November and we normally pick our last flowers for Christmas. This past season we were able to pick over 100 flowers in the

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by

Lance A. Birk

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Orchids at 54° South

Macquarie Island, 1770 km south of Hobart, but politically a part of Tasmania, is a most unlikely place to find an orchid. Nevertheless Biologist Nigel Brothers and Botanist Michael Brown, of the Tasmanian National Parks and Wildlife Service, have done just that. Average temperature is 4.5°C (40°F).

The orchid is *Corybas macranthus*, a new recording for Australian territory. Macquarie Island is a protruding portion of an undersea ridge extending from Stewart Island which is New Zealand's third island, and it is this southern part of that country where previous recordings of *Corybas macranthus* have been made.

The plants were growing in soft, spongy, mosses and grasses about 15 m above sea level.

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Lansdowne Editions are publishing a facsimile edition of the great classic *Australian Orchids* by R. D. Fitzgerald. It will be in two volumes, each limited to 350 copies, numbered and signed by the author's grandson, Robert D. Fitzgerald, distinguished poet and critic.

Colour separations for the new edition have been made by photographing the pages of the author's personal copy. The first volume, leather bound, is now available at \$350.00.

SIXTH AUSTRALIAN ORCHID CONFERENCE

Hobart, October 1979

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There's plenty to do in Tasmania and you will have a wide choice of pre- and post-Conference tours.

Tasmanians, of course, have been preparing for this big event for two years now. They've been having fun from all kinds of fund raising activities, and the kitty is starting to look as though they will be buying plenty of red carpets for mainlanders big feet to sink into.

Raffles, collection inspections, compost selling, slide evenings, stalls, you name it, our Tasmanian friends are using them all to ensure they have cash in hand to really turn on the hospitality.

Flowering flush in Tasmania is about a month later than the mainland, which is the reason the Conference does not clash with the major mainland Spring Shows. Go to the Conference and you'll have two Springs.

All Tasmanian societies are co-operating to make the Conference truly representative of the whole State. Meetings of representatives from each society meet every few months to discuss arrangements.

Register your name now, and ask about any aspect of the Conference and about Tasmania that you wish, The Honorary Secretary of the Tasmanian Orchid Society is Mr. J. F. Smith, 11 Warren Court, Howrah, Tasmania 7018.

Next month this journal will devote space to the scenic wonders of the lovely island.

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The Grafton Orchid Society has a very practical way of helping local charities and at the same time ensuring a good attendance at its Spring Show. Printed tickets are provided to the charities to sell on a 50/50 basis. Thus no one charity can complain that they have been overlooked in favour of another, and the Society is assured of enough money to cover show expenses.

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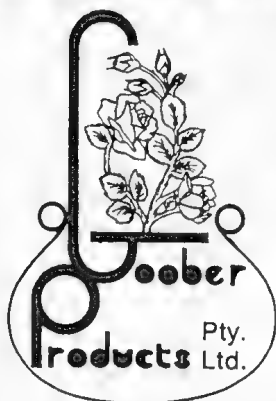
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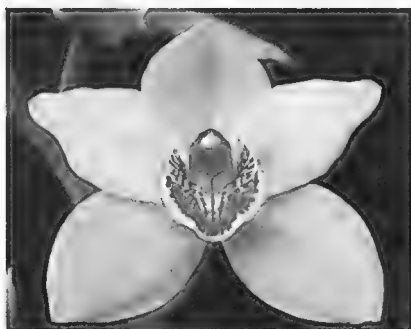
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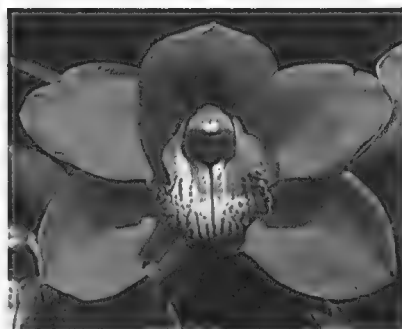
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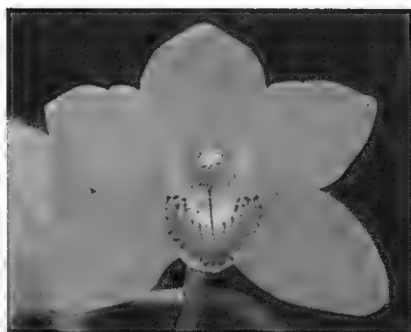
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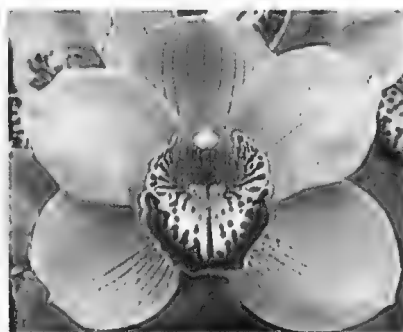
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In Search of *Cymbidium* Optimums

Part II

ALVIN BRYANT

One of the important tasks facing cymbidium growers today is that of solving plant health problems. At present it is certain that existing knowledge does not give all the answers. As a result conventional thinking must be examined, the distortions and shortcomings pinpointed and new possibilities examined.

So far, it has been put forward that the phenolic compounds in plant tissue can become toxic if they oxidise and thus control things harmful to the plant. It has also been put forward that the plant's surface has to dry for this to be effective and the same control may operate in humus. It is unknown just how long a plant's surface may be wet with safety.

Let us look at present cultural practice and begin by asking what the natural control for bacteria is. The chances are most people will not be able to give an immediate answer if they are mentally set to be thinking about cymbidium culture. If however, they are thinking about medical matters then they would instantly think of antibiotics. If then asked what these were made from, everyone would say fungi. A good example of this was the mouldy bread treatment for wounds before medical science became established. Later thinking rejected it but later again it was pointed out that such bread would be full of penicillin mould.

At present many orchid growers have little alternative but to guess that *Pithium*, *Fusarium* or the like are attacking their plants and as a result they are fungiciding with either broad spectrum or more specific fungicides. These are applied regularly as an anticipatory control measure or when some signs of attack are observed. In an attempt to find out just which fungi were responsible I took some samples from the deep internal tissues of some affected plants and grew some cultures. In each case the result showed bacterial infection. Subsequently the Department of Agriculture took some samples from the nursery and once again the result was bacterial. At this point in time some newly infected samples have been asked for on the assumption that the primary infection is fungal and the secondary infection is bacterial.

One obvious fact is pointed to. A fungicide which is not also a bactericide may destroy

the balance. Most fungi are not harmful to cymbidiums. If we make a mistake in our choice of a fungicide we may only be killing the beneficial fungi and so leave the way open to bacterial attack.

When we culture a plant we must examine the difference between the natural factors and our attempt to duplicate them. Watering is a good example. In nature it would be reasonable to assume that rain would be free from many potentially dangerous organisms. As a result new growths which tend to hold water could be expected to contain relatively sterile water. On the other hand once we water a plant there is a possibility that the water may contain organisms harmful to the plant and these would be a potential threat in the water held in the new growth. (In the previous article it was put forward that a plant cannot protect itself if its surface remains wet for too long a time.) Here we have a case where it is just not feasible to duplicate a natural condition. Cymbidiums are not grown in the ground where ground moisture can carry them from one rain storm to the next. They are grown in pots and pots must have regular water. Usually for simplicity the watering is overhead. It is a matter of fundamental importance then to know just what might be coming through our water supply. If significant fungal or bacterial counts are obtained then (1) the water must be treated before application or (2) the compost and not the plant watered.

Until now I have been building a cultural framework whereby the need for fungiciding a plant may be avoided. There is however, a limit to this type of thinking if in nature the only control for a fungus happens to be the physical distance one plant is from another. Logically, such a fungus would have to be specific to a limited range of plants or all the vegetation would be affected. It makes an interesting contrast to a fungus which is normally present as such a fungus must be harmless other than when adverse environmental factors are present.

An example of a fungus where in nature physical distance might be the natural control is the ringspot fungus. It looks like an incomplete circle with a dot in the middle and affects only the leaves. If untreated it can spread rapidly through a collection and apart

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from looking unsightly is a forerunner to heavy virus loss. The fungus is not an immature form of virus as at least one reference source states for it is easily eliminated with one or two applications of a fine mist spray of 1 per cent lime sulphur. This should be applied on a good drying day so it does not run into the new growths. I have puzzled over the virus link for many years and can only conclude that once this fungus attacks a plant with virus the spores then carry the virus and so further plants are affected.

If the cultural policies which may be drawn up at this stage are added to those of the previous article we now have the following for plant health:

(1) Top plants regularly with relatively fresh humus, but not so fresh it will burn.

(2) Ensure a plant's surface dries soon after watering and in particular, dries before watering again.

(3) For a plant's surface to dry effectively (a) keep plants well spaced. (This also reduces the splash from one plant to another.) (b) Provide for air movement. (c) Ensure adequate light for as long as possible during the day. (d) There is a good case for keeping the plant up off the ground apart from hygiene.

(4) Isolate diseased plants, mechanically remove diseased material and allow cut surfaces to dry. Do not weaken by repotting. Water the compost rather than the plant until a safe period has elapsed.

(5) When overhead watering check water for sterility and treat before use if necessary.

(6) Think twice before using a fungicide. If convinced of its necessity consider the possible need for a bactericide also. Ideally, we should know if there is any effect on the plant's own health systems and the harmful organism should be identified first. If possible a treatment specific only for this organism should be used.

(7) There appears to be a case for spraying when the ringspot fungus is involved. If so then it is better to use a non-toxic fungicide like lime sulphur.

It appears to be quite important that we try to group fungi into two groups, namely, those that are normally occurring for which cultural controls should be adequate and those which say physical distance of plants may be the control and a fungicide is the only alternative. This is a goal which seems largely attainable with our present knowledge.

18 Kangaroo Point Rd., Sylvania 2224

The Orchid Grower's "Other" Garden

RUTH RAE

It is natural, of course, that an orchid grower, as a flower lover, should want such of his land as is not given over to orchid houses to look as attractive as possible. For outside use he looks for "other" flowers and plants, preferably tough and hardy, because he really has very little time left to attend to them after looking to his orchids.

There are quite a number of hardy plants chosen for situations near glasshouses and shadehouses which are most suitable for their purpose. However, I would like to draw attention to a few that, because of undesirable features, would be best kept well away from orchid plants.

Because they are low growing and need little attention, violets are often chosen to nestle against walls and soften outlines. Against these walls plants often receive little rain and tend to exist in a rather dry state. Red Spider Mite thrives under these conditions and is very partial to violets. The pest is easily transmitted and some orchids are particularly susceptible to it. Among these are many of the thin-leaved dendrobiums, such as wardianum, heterocarpum, devonianum, hardwood species and hybrids.

Plants that are often attacked by white cottony scale and mealy bugs, such as petunias, african violets and columneas can also be a source of infection to orchids.

Roses and aphides go together: gardenias, ants and sooty mould make an unattractive combination. Many bulbous plants like cliveas, hippeastrums, vallotas, etc., can house vast collections of slugs and snails.

I suspect that the same deadly virus that attacks many beautiful hippeastrums is also partial to orchids. If you suspect virus in a hippeastrum pull up the whole plant and burn it at once. It can spread rapidly because of the great number of sap-sucking insects that are fond of bulbed plants.

In short, if you are a keen orchid fancier, use common sense and prudence in planning the rest of your garden. You could save yourself a lot of trouble.

From *The Grafton Orchid World*

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"But, taking it on the whole, we think the purchase of good orchids and growing them well is a very good way of spending one's spare cash, and in many instances, independent of the large amount of pleasure and happiness one derives from them, proves a good pecuniary investment".

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The Wonderful Highland Mists

Top Award to *Cymbidium* Highland Mist 'Dillabirra'

Many of the clones from the crossing of *Cymbidium* Mary Ann and *C. Miretta* are now world famous. As mentioned in the last issue this cross was registered by McBeans of England in 1968.

Some excellent clones resulted from the McBean hybridising but it was not this seed pod from which most of today's finest award clones emanate. The phrasing of the June report does convey the impression that all the credit was McBeans and several readers have been quick to point this out.

You would, of course, be buying fine mericlones or seedlings from the McBean cross, but the highest ratio of awarded clones is from a crossing made in Australia by Mr. Tom Henry.

Awarded clones from Mr. Tom Henry's cross include 'Lachere' AM and Australian Orchid of the Year in 1975, 'Barrita' Champion *Cymbidium* at Fourth Australian Conference, 'Kersbrook', 'Carolyn', 'Dillabirra', and others.

The Australian version of the cross was made from the clones *C. Mary Ann* 'Simplicity', which has proved itself a top parent, and a *C. Miretta* bred by the late Judge F. W. Berne at Mt. Colah, N.S.W.

This particular *Miretta* was the result of the crossing of two outstanding clones of *Miretta*. The effect of such a crossing would be to stabilise the genetic factors, thus those with desirable attributes would tend to pass them on as dominant characteristics.

After the death of Judge Berne his collection was purchased by the Australian Dos Pueblos nursery, and while employed by them Mr. Tom Henry made the cross. After the winding up of Australian Dos Pueblos the seedlings were fairly widely distributed.

As we have seen, the cross produced an astounding array of show and award winners, many of which have been mericlones, a number of the latter finding their way to America.

It was fitting that while on a recent trip to California, and the Santa Barbara Show, the man who made the Australian version of this cross, Mr. Tom Henry, should see one of its clones, *C. Highland Mist* 'Dillabirra' receive the highest commendations Americans can bestow on an orchid.

The plant, owned by Mrs. Frae Wittner and Dr. Roy Wittner of Eureka, California, became Grand Champion of the Santa Barbara Show against the toughest competition in the U.S.A.

It became only the seventh flower to receive a Gold Medal from the *Cymbidium* Society of America. It was also given a First Class Certificate by judges of the American Orchid Society, and the Perpetual Santa Barbara Show Trophy.

How fitting that Tom Henry was present to witness and share in this triumph.

Congratulations to Tom, to Dr. and Mrs. Wittner, and to you too if you happen to have a plant of *C. Highland Mist* 'Dillabirra' or any of the other awarded clones of the cross.

Cymbidium *i'ansonii*

In the June issue this species was referred to as *C. l'ansonii* and Rebecca Northen gives it as *C. L'ansoni*. However, it was named for the collector George L'Anson who found it in Upper Burma after a plant had been accidentally introduced into England in a consignment of *C. lowianum*. The correct name is therefore *C. i'ansonii*. In accordance with modern nomenclatural practice species names are not capitalised.

C. Mem. Robert Casamajor 'Wanda'

This wonderful *cymbidium*, pictured in colour on page 87 of the June issue, was credited in the text as being champion of the 1977 Tasmanian O.S. Spring Show. This should have read 1972 Spring Show, the photo, however, is of the 1977 flowering.

RECORD TERM OFFICE BEARER

After the last Annual General Meeting of the Manly Warringah O.S. (N.S.W.) the committee list showed that something remarkable had happened: Mr. Wal Upton's name was not on it. Wal was the Foundation President of Manly Warringah and, before that, held positions from Secretary to President in the old Manly Orchid Society over a period he estimates at twenty years. This means a total of well over thirty years on orchid committees without a break. Wal was for a time also on the management committee of the O.S. of N.S.W. He was also Foundation Secretary of the Australasian Native Orchid Society. Wal is noted for his knowledge of the botany of orchids and his fine drawings of Australian species. He has written a small book called "Growing Orchids", published by Rigby, and selling at about 45c a copy, which has sold over 40,000 copies.

We can be sure Wal Upton will not be taking a rest, merely devoting his time to other orchid activities.

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In Australia we are extremely lucky to be able to select from a wide range of high quality orchid plants. With cymbidiums we can go to such nurseries as Wondabah Obstetric ward for some of the world's best coloured cymbidiums; Mr. Alvin Bryant, leader in pure colour strains; Adelaide Orchids, prolific breeder of award winners; Valley Orchids who are producing outstanding pure colour and colchicine treated strains. Then we have the choice of fine English lines through McBeans, and the easily obtained top rankers produced by Stewarts and Featherhill of the U.S.A.

Just looking through the advertisements in this magazine is the best and easiest way to learn the wonderful wealth of choices available.

Besides the nurseries mentioned, there are many splendid, if smaller nurseries, with interesting breeding programmes of their own, or who grow on flasks obtained from the breeding nurseries.

If you live near any of the nurseries advertised then make a point of visiting them at flowering time. Many of them exhibit at shows and here the judges' choice will indicate quality.

But what to buy?

The hobby grower today has two broad paths he can follow. He can do what the growers of roses or camellias have been able to do all along, that is select the very best clones available and endeavour to grow them extremely well, or he can judge what appear to be the most promising seedlings and punt.

Both courses have their attractions.

A third course is to have a little each way.

THE BEST CLONES

These are the champs, the recent awards and show winners, which have been reproduced in hundreds or thousands by meristem culture. Because the supply is so good the prices are low.

Clones like C. Highland Mist 'Lachere', AM, Orchid of the Year in 1975, and C. Highland Mist 'Dillabirra', Champion at the Fifth Australian Conference and just awarded FCC in America, have been selling as mericlones at around \$10.00. Twenty years ago they would have cost you at least \$1,000.00 and a long wait for a small piece.

If you wish to win prizes at shows and

society meetings the top mericlones are for you. Many of these will be capable of winning show championships for some years ahead. However, there will be many growers with the same idea so the decisive factor will be culture.

So — if you seek ribbons and show cards you will need to keep your plants down to the maximum number which can be cultivated superbly well. For a hobby grower this could be no more than 40 or 50 plants. They will need to be adequately housed and efficiently programmed for optimum growth. There should also be a firm commitment to upgrading as better mericlones become available.

Selection becomes a matter of balance in colours, early, flush, and late flowering clones.

The list below is not complete, particularly in early clones, however, it is a useful basis for consideration:

THE EARLIES

White: Valley Song 'Maureen'. Green: Zuma Boyd 'Yowie Bay', Lunagard 4N. Red: Nuna. Pink flush: Sylvania 'Sonnet'. Yellow: Melinga 'Rum Jungle'.

SPRING FLUSH

Whites: Any awarded Highland Mist, Mary Ann 'Simplicity', Sleeping Dream 'King's Ransom', Balkis 'Captain Anderson', Mem. Robert Casamajor 'Del Mac'. Green: Joyce Duncan 'Susan Hughes', Joyce Duncan 'Mem. Claude Hammond', Via Real 'Wondabah', Lagoon 'St. Melita', Sea Gem 'Norma', Dr. Lloyd Hawkinson 'Piedmont'. Red: Sensation 'Chianti', Coldstream 'Inferno', Featherhill 'Heritage'. Pink: Narela 'Jennifer Gail', Lillian Stewart 'Coronation', Vieux Rose 'Del Park'. Polychrome: Burgundian 'Chateau'. Yellow: Coraki 'Golden Charm', Wallara 'Gold Nugget', Papa Sam 'Erigolia'.

Next issue: The choice in seedlings.

Townsville welcomes all

Mr. M. Richards is the new President of the Townsville Orchid Society. Other officers are Treasurer Mr. W. Griffiths; Mrs. K. Greenway, Assistant Secretary; and Mr. E. Boon, Secretary of 1413 Ross River Road, Kelso 4815.

Mr. Boon assures all visitors to the north that they will be very welcome at meetings. They can contact the Society at P.O. Box 83, Townsville, or by phoning 74 0488 or 79 3835.

The Society now meets at Souths Junior Rugby League Hall, Pioneer Park, Townsville.

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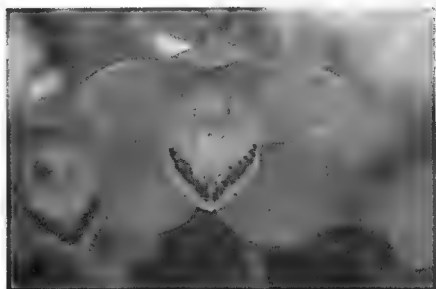
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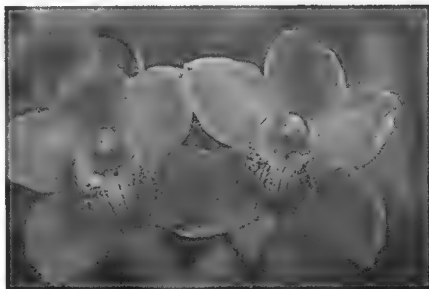
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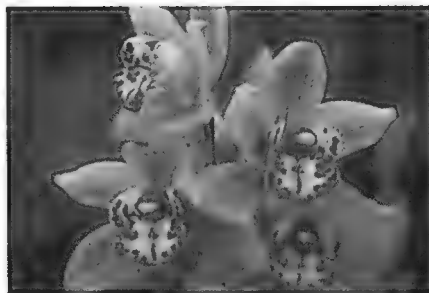
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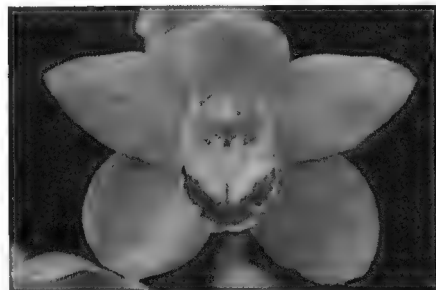
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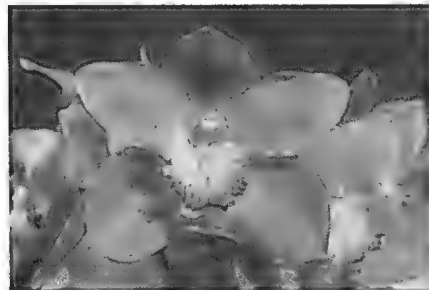
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THE SHOW SCENE

Orchid Society of N.S.W.

The Orchid Society of N.S.W. went to a new venue, the Merrylands Mall, for its 1978 Winter Show. Active promotion by the Mall, which included a full hour's TV coverage by the ABC, ensured a large attendance by the public. A high proportion of Mall shoppers showed more than a casual interest, demonstrated by the high proportion of plant sales made.

Grand Champion went to that wonderful paphiopedilum *P. Orchila* 'Chilton' from Wondabah Orchids. Reserve Champion was Mr. Reg Trennery's *P. Lyric* 'Reflection'. Champion Other Orchid was *Phalaenopsis* Lady Doreen, superbly flowered by Mr. R. Montgomery. The striking yellow *Blc.* Malworth 'Orchidglade' gained the Reserve Champion Other Orchid for Mr. Gordon Giles.

A collection of four paphiopedilums from Mr. Trennery was selected as the Most Pre-Eminent Entry.

As always the Affiliated Societies displays attracted a great deal of attention. North Shore O.S. presented their usual fine effort to come first by an overwhelming margin, followed by Eastwood, then Parramatta. A pleasing surprise was the achieving of fourth place by Sydney Orchid Society, a small society known as a band of triers but rarely among the top place getters. This time they were ahead of the powerful Sutherland O.S.

Displays by Cumberland, Western Suburbs, Berowra, Bankstown, and St. George were colourful and attractive, lacking only a greater range of genera to have gained higher placing.

Especially interesting to the connoisseurs were the table top size displays of species orchids. Six entries in this class were headed by North Shore, with Cumberland second, and Eastern Suburbs third.

The wide range of genera indicated the extent to which winter flowering species and hybrids are now cultivated, and also the high standard of new early flowering cymbidiums. A cross between *C. Earlyana* and *C. Lunagard*, registered as *C. Luana* in 1975, won best seedling for Mr. and Mrs. Gulbis, with *C. Luminya* (*Sirius* x *Lunagard*) second, owned by Mr. K. Black.

Class 8, Best Cymbidium, was a triumph for Mr. J. Mata with his *C. Valley Song* 'Maureen', with second to a cross of Lucy and Fred Stewart, owned by Mr. and Mrs. Gulbis.

Best minicym was *C. Pipeta* 'Norm Wyborn' shown by Mr. and Mrs. Goudie. Best Novelty *C. Chocolate Gem* (*Mimi* x *Rincom*) from the collection of Mr. A. Birdsall.

Other outstanding plants were *Den.* Lady Hamilton 'Red Flare' belonging to Mr. R. Hewson; *Vanda* Laukepa from Mr. J. Allen; *Ascda.* Koh Man 'Red Satin', Mr. and Mrs. Gulbis; and a fine *Den. bigibbum* of Mr. D. Davies.

Decorative classes drew big crowds due to their intrinsic interest and high standard of artistry. N.S.W. is indeed fortunate to have such decorative experts as Mesdames Rollings, Perry, James, Hansen, Cooper, Flecknell, Davis, and Caldaia, all of whom won prizes.

Orchid Club of South Australia

A feature of the Winter Show was the success of a Novelty Cymbidium as Champion. This was

C. Pelleas 'Monterey Bay' grown by Mr. and Mrs.

Auliciems. In a 250 cm pot of coarse bark mixture, it had seven spikes, each with about 18 shapely deep pink to red flowers with burgundy lips.

Reserve Champion was a remarkable species *Paphiopedilum fairrieianum* 'Red' grown by Mr. Bill White. It had three large flowers on a small plant, each with a wide white, purple striped dorsal, fringed with a green labellum lined with brown. Grown in a mix of charcoal, fir bark, shell grit, and foam granules.

Champion paphiopedilum was *P. Lemon Hart* belonging to Mr. and Mrs. Medlin. It was a lovely lemon Green colour, with a darker green striped white dorsal.

Mr. Vigants gained the prize for Champion miniature cymbidium with *C. Beacon Fire* 'Perfection'. It had one arching spike of 30 dark red flowers with burgundy lips.

C. Valley Song 'Maureen' was champion cymbidium, owned by Mrs. Gray. The twelve flowers were white with a pink flush, lightly spotted red on the labellum, all well displayed on an upright spike.

"Life Be In It"

There was certainly life in the Victorian Orchid Clubs theme for the Winter Show. The displays took it up in lively fashion. Mornington Peninsula O.S., for instance, showed two happy gardeners enjoying life with orchids. Warrigal O.S. featured orchids around a life raft with the caption "All aboard the Life Boat — Be in it".

The display at Doncaster Shoppingtown attracted many such entries.

Champion Orchid of the Show was *Miltonia* Limelight, grown by Dr. Rigg, and Champion Paphiopedilum went to *P. Cavalcade* 'Beauty' owned by Mr. R. Smith. Mr. R. Martin earned a first for his group of four paphiopedilums.

One paphiopedilum to look for at future shows is the newly flowered seedling *P. World Exploit* x *P. Jackandry*, which won its class for Mr. R. Martin.

Cymbidiums which will need watching include *C. Grandly* which won Best Cymbidium, and the seedling *C. Iron Knob*, owned by Mr. Martin.

Among the 42 classes, prizes were well distributed among the societies and individual growers.

BUNBURY ORCHID SOCIETY — WINTER SHOW

The Bunbury Orchid Society staged their annual Winter Show at the Grosslands Shopping Centre from Thursday 20th July until Saturday 22nd July.

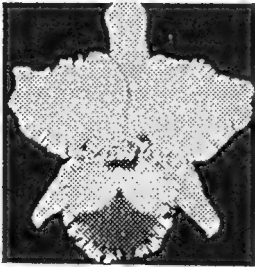
The Champion Orchid was *Paph.* 'Sweet Harmony' x 'Lemon Hart' exhibited by Mr. and Mrs. L. Munnings.

The Reserve Champion was *Cymbidium* Angelica 'December Gold' exhibited by Mr. and Mrs. M. Davidson.

The Best Orchid in the section open to all members of the Orchid Society of Western Australia and its Affiliates, was *Cattleya* Nosegay 'Doreen' exhibited by Mr. and Mrs. J. Bunce.

The show was a great success and the overall spectacle was very pleasing.

The Spring Show will be staged at the Bunbury Shopping Plaza from Thursday 28th September until Saturday 30th September.



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BOOK REVIEWS

"Ten year index to plant illustrations"

A compilation of the illustrations from ten influential orchid publications (with a few extras thrown in) for the years 1968-1977. This book is obviously a labour of love by Mr. George E. Woolfson of Michigan, U.S.A.

The index includes almost exactly 9,000 references, in 482 genera, from 607 issues of the various periodicals. Naturally it includes species, awarded clones, and outstanding plants, and is thus an easy way to locate data regarding a specific orchid. Pictures in advertisements are included for the first occasion they appear, a fact which can be a great aid to identification and to the buying of orchids.

In his foreword the author says, "The inspiration to compile the index . . . comes from the frustration of sitting in my own orchid library, having exhausted the possible references to a particular plant in the various orchid books and floras — having come up empty — and staring at the rows of magazines, all nicely arranged in chronological order, thinking that somewhere, in some one of those periodicals there is the information I want about that obscure plant, that awarded flowered, that elusive species, if only I knew where!"

Most of the orchid journals used are available in society libraries. They include this journal, *Orchid Review*, *Orchid Digest*, *Orchid Advocate*, *Cymbidium Society News*, and among the throw-ins is the *Orchadian*. The *American Orchid Bulletin* is not included because an excellent picture index has been available from Mr. Robert Hamilton of 921 Beckwith Road, Richmond, B.C., Canada. The 1972-77 supplement is still available from the publisher at \$2.25 post paid.

Any keen orchidophile will have quite a number of magazines gathered over the last ten years, and to him the index will be particularly valuable. It will be of utmost value to hybridisers, botanists, public libraries and society libraries.

The author is also agent for all books and papers on the orchids of Thailand and surrounding countries by Gunnar Seidenfaden, the recognised pre-eminent authority on this area, and a list of them, with prices, can be obtained on request.

Ten year index to plant illustrations in 10 influential orchid periodicals (with a few extras thrown in) 1968-1977. Compiled by George E. Woolfson. 68 pp. + XLV, 25 x 17 cm. Preface by Robert M. Hamilton. Paperbound. Available from publisher: Twin Oaks Books, 4343 Causeway Drive, Lowell, Michigan 49331. Price \$7.95 (US) postpaid anywhere.

Die Orchideen Band I No. 10

Rudolf Schlechter

Publication in parts of Schlechter's revised and up-dated *Die Orchideen* has been proceeding for some years. Undoubtedly it is the most comprehensive coverage of the orchid families ever undertaken. Text is in German.

Part 10 of the first volume was received while this reviewer was overseas and consequently this review is late. However, copies, together with previous parts, can still be obtained from the publishers: Paul Parey, 1 Berlin 61, Lindenstrasse 44-47,

Berlin. Price for each part is DM24, equivalent to about \$A10.30.

Part 10 covers the subtribe *Epidendrinae*, which includes the genera *Encyclia*, *Cattleya*, *Laelia*, *Broughtonia*, *Cattleyopsis*, *Schomburkia*, *Neocogniauxia*, *Rhyncholaelia*, *Brassovola* and *Sophranitis*. The genus *Epidendrum* was covered in Part 9.

The value of the work lies in its carefully evaluated classifications, not only within each subtribe, but in the sections within each genus where this is necessary. The original work revealed many new taxonomic affinities and Schlechter regarded some of his sections as worthy of separate generic status. Many of these ideas have been followed by modern botanists, for example the recent splitting off of the *Odontoglossum* section *Rossioglossum* into a separate genus.

Drawings and photographs demonstrate the morphology of each genus, and are almost self explanatory. Although the text is in German nomenclature conforms to standard Latin terms, thus a good German-English dictionary and the elucidation of a few key words can usually make the description apparent to a non-German reader.

This reprint is destined to become as famous as the original edition. It is a carefully produced work, as worthy in the library of a bibliophile as in the library of an orchidist.

"SOIL CARE"

Most orchid growers have problems concerning composts. Generally beginners depend on learning what others are doing and then following suit until, by trial and error, they work out a suitable compost for their own conditions. In many cases it becomes a matter of adapting ingredients which are readily available in their area and this is best done by an understanding of the principles involved.

"Soil Care", by Dr. K. R. W. Hammett, is a compact, tightly written book which reduces the complexities of soil structure, plant nutrition, and composts, to understandable terms with the minimum of technicalities.

While not written for orchid growers it is full of details important to them. For instance, the formulation of slow release fertilizers; the effects, or lack of them, of foliar feeding; and the micro organisms found in all soils and composts. Also the formulae of John Innes and U.C. composts, and the approximate NPK ratios of simple fertilizers. The merits of both organic and inorganic fertilizers are explained.

The book is well illustrated in colour and black and white, with explanatory diagrams. Typography, layout, and printing are all of a high standard. All this for the low price of \$4.95.

"Soil Care" by K. R. W. Hammett, published by A. H. & A. W. Reed Pty. Ltd., and available at most booksellers.

"PRUNING"

A compact little book by Pax Lindsay, well known horticultural journalist.

Drawings and photographs illustrate the essentials of pruning. The bulk of the book lists shrubs and trees in alphabetical order and gives a description of the pruning technique for each. A valuable feature is the detailing of after care where this is necessary.

A very handy reference book for its price of only \$2.50. Published by Reeds.

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VALE

Great club man passes

South Australian Orchid Club members were saddened by the death of one of their most indefatigable workers, Mr. Max Clayton. After joining the club in 1963 he was quick to accept positions of responsibility. On learning that he had terminal cancer he determined to live the remainder of his life to the full, and accordingly undertook the task of Show Marshal for the 1977 Spring Show. The Show was very successful.

He remained a Judge, and on the Committee, until the time of his death.

The late Mr. Clayton was well known to growers from other parts of Australia all of whom will join in admiring his courage and expressing condolences to his widow.

Grafton's grand old man dies

Patron and Life Member of the Grafton Orchid Society, Mr. P. C. Sanders, died on the 30th July last at the age of 94. The late Mr. Sanders was a foundation member of the Society, its first President, and a fine grower. Prior to the formation of the Society he staged his own orchid show to benefit the Red Cross. It is such men as the late Mr. Sanders who by giving service to their community, and helping contribute to the enjoyment of life by others, make the world a better place.

The late Mr. Herb Bawden

The N.S.W. Orchid Society lost one of its oldest members (in both meanings) with the death of Mr. Bawden. While less active as a grower in recent years there were few Society functions and meetings he did not attend. He was one of the State's first cymbidium hybridisers and he named several crosses for members of his family. His cheerful face and courteous manner will be missed.

The Late Thelma Beaumont

Mrs. Thelma Beaumont of Hawaii was well known to many Australian growers. With her husband Mr. Herbert Beaumont she spent some time in Australia during a project to select the best forms of *Macodamia* from wild plants in order to establish the growing of these nuts in Hawaii. As keen botanists they had splendid opportunities to study Australian orchids, and to meet local growers. They had an outstanding collection in Hawaii and were always pleased to entertain Australian growers. Mrs. Beaumont was a regular contributor to the "Hawaii Orchid Journal" and frequently referred to "A.O.R." and Australian orchids.

She will be sadly missed in Hawaii and by her friends in Australia.

MANIPULATION BAN LIFTED

The line between manipulation and grooming of flowers for the show bench has always been difficult to define and impossible to police. The experienced grower knows the impossibility of turning a poor flower into a good one by physical manipulation but sometimes a good flower can be improved by careful growing. However, the conscientious grower has felt inhibited by the feeling that any grooming could be interpreted as "manipulation".

However, at the 1977 meeting of the Australian Orchid Council the States voted unanimously to remove any restriction upon preparation of flowers. This brings orchids into line with most other flower and animal judging standards.

Show dates and amendments

Alstonville Orchid Society. This northern N.S.W. society advises that the Spring Show will now be held at the Uniting Hall, Alstonville, instead of the Agricultural Hall as given in the June issue. The date, 30th Sept., is unchanged.

Maitland Orchid Society. In the June issue meeting night was given as the third Thursday instead of the second Thursday. Same place, the Literary Institute, Banks St., East Maitland.

Newcastle Orchid Society. Meeting night is the third Wednesday of the month in the G.U.O.O.F. Hall, Steel St., Hamilton.

Mornington Peninsula Orchid Society. Meetings are held fourth Friday of each month in St. Pauls C. of E. Centre Hall, cnr. Bay St. and High St., Frankston. Hon. Secretary is Mr. M. J. Blain, 40 Ninth Ave., Rosebud, Vic. 3939. The 1979 Spring Show will be held in St. Pauls Hall on Saturday and Sunday, 13th and 14th October.

Newcastle Orchid Society. SPRING SHOW. This show will now be held in the Newcastle City Hall Auditorium. Dates are the same, namely Wed. 6th Sept. to Sat. 9th.

Belmont-Swansea Orchid Society. This society is at the moment inoperative and consequently there is no Spring Show.

Launceston Orchid Society. Meetings are now held at the Launceston Matriculation College, Paterson St., still on the third Thursday of the month. Spring Show is still at the Masonic Hall, Brisbane St., on 6th to 8th October. Mainland visitors are very welcome.

Tamworth Orchid Society. SPRING SHOW. Myer Ltd. Store, Friday 22nd Sept. 9 a.m. to 5 p.m., and Sat. 23rd 9 a.m. to 11.30 a.m. Meets third Wed. at Centre of Continuing Education. Hon. Secretary, Mr. Max Tom, 6 Griffin Ave., Tamworth. Phone 66 4297.

Toowoomba Orchid Society. SPRING SHOW. Myer roof-top car park, during the Carnival of Flowers, 23rd to 30th Sept., daily from 9 a.m. to 10 p.m. Meets fourth Friday at St. James Parish Hall, Russell St. Secretary, Miss E. Miles, 6 Somme St., Toowoomba. Phone 32 7154.

Ira Butler Awards

The Ira Butler Memorial Awards are given for two types of achievement in the hybridising of native orchids:

- (a) Annual National Trophy for best native orchid hybrid.
- (b) Trophy of Achievement to be awarded by the Ira Butler Memorial Committee for achievements in hybridising Australian native orchids.

To be eligible for the Ira Butler National Native Hybrid Award the owner must submit his plant to his State society in accordance with normal rules for Award submissions. It must also be colour photographed. Even though it may not receive an Award the points gained and transparency can still be submitted for appraisal. The committee reserve the right not to make the Ira Butler National Award in any one year.

Any person may apply, or be nominated, for the Ira Butler Memorial Achievement Trophy. Nominations may be by an individual, a group, or a society, and should be addressed to The Ira Butler Memorial Trophy Committee, Australasian Native Orchid Society, P.O. Box C106, Clarence Street, Sydney 2000.

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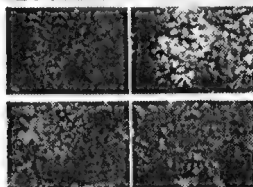
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Old world guild houses and ultra modern factories are tempered by wide clean streets. The whole city has an atmosphere of graciousness.

Most people are multi-lingual so Australians attending the Congress will have little difficulty in making themselves understood.

Even without the attractions of orchids it's a city that should be on every traveller's itinerary. With an Orchid Congress as well as its charming atmosphere it becomes an absolute necessity for all who will be in Europe at that time to juggle their arrangements to ensure they will be able to attend.

Prompt enquiry should be made to the Secretary of the Congress, Miss Dora Gerhardt, CH-6082 Hohfluh (Hasilberg), Switzerland.

ORCHID CLUB OF S.A. AUTUMN SHOW

This Autumn Show was attended by 360 members and friends.

The floral display as a whole was quite good, some sections were however, not well represented, but the plants were in show condition and it could be seen that the owners had taken the necessary care to have them nicely presented.

The Champion of the Show was *Cattleya Portiata* 'Mel' grown by K. & G. Staples, a strong growing plant carrying three heads of well shaped mauve flowers, each having seven, eight and nine flowers respectively.

The best flower in the First Division was *Bc. Languedoc* 'Singapore Welcome' grown by Mr. and Mrs. Kiely. A well grown plant having three flowers of a pale pink colour of good shape and large size.

The best flower in the Second Division was a species, *Rossioglossum grande*, grown by Mr. J. Leeder. A small plant but growing on well, with five flowers of yellow and brown stripes or bars. An attractive plant.

Orchid Club of S.A. Awards

AWARD No. 76

Dendrobium Gatton Monarch granted a Cultural Certificate, 4.11.76. and grown by Mr. A. Oliver.

This plant with mauve coloured flowers was very well grown, having 24 flowering canes with 328 flowers, all in excellent condition, and considered worthy of the award.

AWARD No. 77

Sarcochilus hartmannii granted a Cultural Certificate 4.11.76. grown by Mrs. L. Williamson.

This plant was an outstanding example of excellent culture, having 110 spikes with 750 flowers and 480 buds. The flowers were all in perfect order, glistening white with a faint orange throat.

AWARD No. 78

Paphiopedilum Vanda M. Pearman 'Kam' granted an Award of Distinction 2.12.76.

This was a first flowering seedling. Flowering off the 2nd and 3rd growths. The plant held two fully opened flowers on one raceme, one fully opened flower and one bud on the second raceme. The white coloured flower with the heavily spotted covering of red made it a very attractive and distinctive paphiopedilum, together with the round shape.

AWARDS ORCHID CLUB OF S.A.

Number 101. At the Autumn Show *Phalaenopsis* Percy Porter (Harlequin x Mildred Karleen) was granted an Award of Distinction for the flowers' outstanding colouration. Owners Johnston Orchid Nursery. The plant, only small, had one long raceme with eight fully opened flowers and five buds to open. For this type of flower the shape was very good, although the overall size does not match that of the whites, being 80 mm across. The base colour was white heavily overlaid with spots and slight striping of a purple colour, with a matching but darker lip. A nice orchid.

Number 100. *Miltonia* Anne Warne, awarded a Cultural Certificate Orchid Club of S.A. Inc. on 6-4-78 for Mr. Ken Minne.

The plant, growing in a 10 inch squat pot and almost filling the container was considered in good condition, bulbs and leaves an even light green, most bulbs having leaves. The average size of the 33 flowers on 17 spikes was 90 mm. The colour of the sepals and petals was an even deep plum, the lip pink with deeper veining. A plant attracting much attention.

FLOWERING HARDCANES

Dr. Rae, in *The Grafton Orchid World*, recommended using Monobasic Potassium phosphate at the rate of one teaspoon per bucket of water when fertilising hardcanes prior to flowering. This will give better flowers for texture and colour.

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Applications for seed must be accompanied by payment of \$1 Aust. for the first lot plus 50c Aust. for each successive lot. All despatches will be made promptly by airmail.

Some holdings of seed are very small and will be distributed on a "first come, first served" basis. Please nominate alternative species. All cheques should be made out to "A.O.F.", and all communications addressed to: Mr. L. J. Lawler, A.O.F. Seed Bank, Department of Biochemistry, The University of Sydney, N.S.W. 2006.

Further details of some samples are available and will be given on despatch.

The A.O.F. is grateful to all the donors of seed, as the success of this venture depends entirely on their generosity.

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Caladenia species: *carnea*, *dilatata*, *graminiaefolia*, *lobata*, *roei*.

Cymbidium canaliculatum (also "greenform"), *madidum*.

Cryptostylis ovata.

Dendrobium aemulum, *antennatum*, *bigibbum*, *bigibbum* "white spot", *canaliculatum* "pink form" (A.O.R. March 1977), *dicuphum*, *kingianum*, *linguiforme*, *lobbi*, *speciosum*, *speciosum* v. *hillii*, *teretifolium* v. *teretifolium*, *teretifolium*.

Diuris laxiflora, *maculata*, *palachilla*, *palustris*, *brevifolia*, *laxiflora*, *pedunculata*.

Eulophia pulchra.

Habenaria ochroleuca.

Phaius tancarvilleae, *curta*, *nana* (W.A.), *nutans*, *pedunculata*, *recurva*, *scabra* v. *scabra*.

Sarcophilus australis, *fitzgeraldii*, *hartmanii* "alba".

Thelymitra antennifera, *cyanea*, *fuscolutea*, *longifolia*, *luteocilium*, *pauciflora* (blue), *pauciflora* (white), *rubra*.

Vanda hindsii (New Guinea).

EXOTIC SPECIES

Barkeria melanocaulon Rich. et Gal., *Bc. naevosa* (Lindl.) Schltr., *Bletilla striata*, *Chysis aurea* Lindl., *Clowesia rosea* Lindl. syn *Catasetum roseum*, *Dendrobium formosum* "giganteum", *D. gouldii*.

Encyclia adenocaula v. *adenocaula* Schltr., *E. meliosina* (Reichb.f.) Schltr., *E. subulatifolia* (Rich. et Gal.) Dressler.

Epidendrum cnemidifolium Lindl., *E. cristatum* Ruiz et Pav., *E. propax* Reichb.f., *Erycina diaphana* (Reichb.f.) Schltr., *Laelia Albida* Batem. ex Lindl., *L. anceps* Lindl., *Odontoglossum karwinski* (Lindl.) Reichb.f., *O. pulchellum*, *O. reichenheimii* Linden

et Reichb.f., *Oncidium hintonii* L. O. Williams, *O. pollardii* Dodson, *O. splendidum*.

Orchis morio, *Spiranthes hemichrea* Lindl., *Stanhopea oculata* (Lodd.) Lindl.

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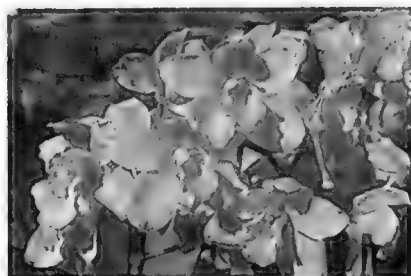
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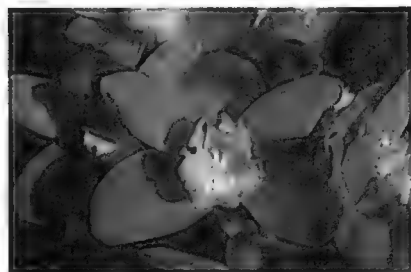
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Volume 43, No. 4

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1979 COLOUR CATALOG – Cattleyas and Other Genera

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FRANK SLATTERY *has them for you – See opposite page.*

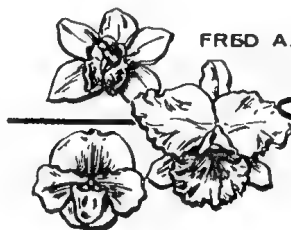
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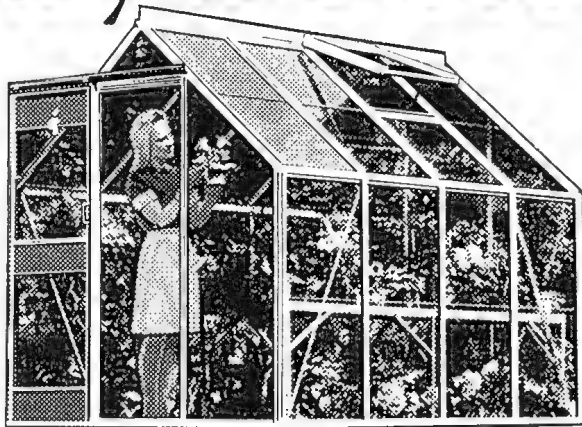
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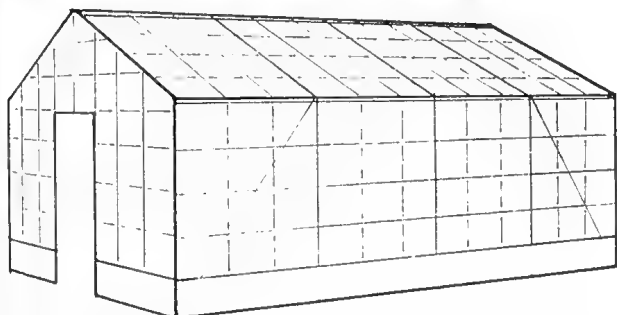
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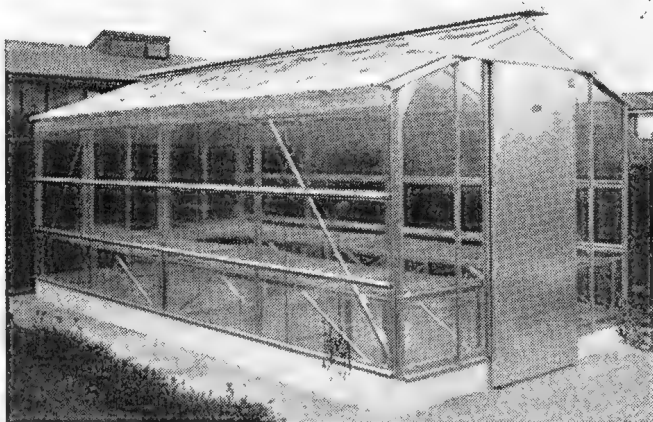
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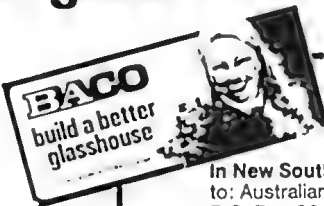
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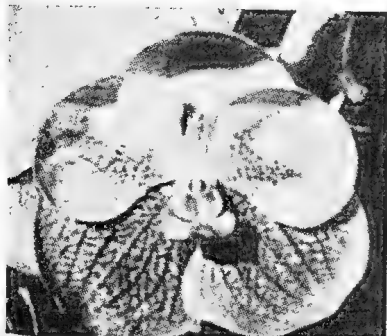
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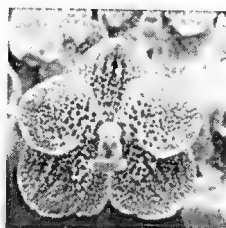
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Australian Orchid Review

DECEMBER, 1978 VOLUME 43 No. 4

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Australia: Aust. \$6.00 per annum.
Overseas: Surface mail Aust. \$8.00 (U.S. \$11.00) per annum. Airmail Aust. \$14.00 (U.S. \$18.00) per annum.
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COVER STORY

Blc. Malworth is a cross made by Jones & Scully of Florida and registered in 1963. Parents are Lc. Charlesworthii and Blc. Malvern. The outstanding clone of the cross was given the name 'Orchidglade' after the Jones & Scully nursery. Cattleya dowiana is the species exerting most influence since it has been used six times over the seven generations in the ancestry. Undoubtedly some of these C. dowiana clones were of the 'Aurea' form. Cattleya bicolor appears twice, and Cattleya eldorado, Laelia xanthina, Brassavola digbyana, and Laelia cinnabarina, once each. Many growers regard Blc. Malworth 'Orchidglade' as the best yellow yet bred. Mr. Ray Dean flowered his plant superbly. It was awarded FCC in Adelaide and narrowly missed out on FCC for National Award. For more details see Australian Orchid Council Awards in this issue.

EIGHTEENTH ANNUAL MEETING OF AUSTRALIAN ORCHID COUNCIL

The Annual Meeting of the Council was held in Adelaide on Wednesday, 27th September last, the President, Mr. S. A. Monkhouse, in the Chair.

Apologies were received from Mr. G. McCraith, Programme Director and a Past President, and Mr. B. Paddock, Immediate Past President. It is notable that this was the first Annual Meeting missed by Mr. McCraith since the inception of the Council.

These are the major decisions:

Regional judging. It was resolved that Regional Judging for National Awards be instituted for a trial period of two years commencing 1st May, 1979.

Seventh Australian Orchid Conference. Queensland confirmed that the Conference would be held in conjunction with the 1982 Commonwealth Games, in the periods 30th September-10th Oct.

Constitution. Minor amendments were made to the current Constitution to streamline administration. A new draft Constitution is to be made for consideration at the next Annual Meeting. The matter of fund raising also to be considered.

Flask donation. The President donated two seedling flasks to each State to be used to raise money for the A.O.C.

Slide programmes. The Programme Director's report showed just how popular this service is with orchid societies. However, postage costs have now become so high that this is a strain on the Council's resources. It was decided that a charge of \$2.00 be made for the use of each slide programme and Affiliated Societies pay this at the time of reserving the programme. Seven new programmes are now in production.

Orchid of the year. See report elsewhere.

JUDGING AMENDMENTS

Single stem flowered genus, Lycaste. Awarding of points for floriferousness: In the application of scale points there to be two points per flower on the one bulb carrying the flower being judged, with a maximum of ten points.

It was also carried by a unanimous vote of the States: "All species to be judged by the appreciation method". That is, not pointed.

OTHER MATTERS

The Conference dealt with matters pertaining to the Tenth World Orchid Conference, the Statehood status of the Northern Territory, and the matter of costs involved in drafting the new constitution.

SIXTH AUSTRALIAN ORCHID CONFERENCE

The meeting considered a report from Tasmania on the progress of Conference arrangements. A motion was carried that "A.O.C. Medallions be presented to the winners in selected classes at the Show held in conjunction with the A.O.C. Conference".

It was resolved that the medallion carry the A.O.C. Emblem on the front and on the reverse be struck as the "Australian Orchid Council Conference Medal" and be produced in gold, silver, and bronze.

ELECTION OF OFFICERS

The following were elected unopposed: President, Mr. S. A. Monkhouse; Treasurer, Mr. D. F. Gallagher; Programme Director, Mr. G. McCraith; Programme Librarian, Mr. G. Woolley; Publicity Officer, Mr. R. Mansfield.

Mr. F. Slattery and Mr. L. Sasso were elected Vice-Presidents, and Mr. J. Marks Registrar-General.

NEW A.O.C. SECRETARY

Mr. D. J. Harris has carried out a sterling task as honorary secretary to the Council but other commitments have forced him to relinquish this post. The new secretary is Mrs. B. Lynch of 23 Holder Avenue, Hove, S.A. 5038. Henceforth all matters relating to the Council should be addressed to Mrs. Lynch.

GOLD COAST CONSERVATION PROJECT

In September last, members of the Gold Coast Orchid Society planted over 250 native orchid plants on trees, rocks, and in the ground in the Currumbin Trust Park grounds.

The Currumbin Trust Park is an area of natural bushland incorporating a wide range of sub-tropical environments. It is fenced and protected by rangers and therefore an ideal area for the introduction of orchid species. The park includes two rain forest areas, scrub forest, open land with large shade trees, creeks, and swamps.

The Gold Coast Society Conservation Committee hope to establish as many Australian species as possible in this area. They will appreciate donations of plants from anywhere in Australia. Donors should contact Mr. J. Bailes, 67 Eugaree Street, Southport 4215.

The Society particularly thanks Mr. E. R. Ebney of Mackay for his large donation of species plants.

The next phase is to plant orchids in a 40 hectare section of the park, and as Mr. Bailes says: "We need every native orchid we can get". Can you spare a few?

VICTORIAN ORCHID CLUB OFFICERS

Mr. R. Hodgins is now President of the Victorian Orchid Club. Mr. Hodgins is well known for his excellent orchid nursery at Frankston where he has virtually grown orchids since boyhood. His father was one of the pioneers of orchid growing in Australia. Club Secretary is Mrs. I. Hutchins, 37 Elliots Street, Mordialloc 3195. Treasurer is Miss M. Holland, 12 Mitchell Avenue, Warrandyte 3113 and Editor Miss J. Clark who is making an excellent job of the club bulletin.

LIFE MEMBERSHIP FOR MR. HARRY SCHULTZE

Harry Schultze is one of the most widely respected orchid men in Australia. He has a lifetime record of assistance to every orchid society in Victoria. Thus there will be many who will be pleased to hear that the Victorian Orchid Club have honoured Harry with Life Membership.

FIRST W.A. REGIONAL CONFERENCE

The Bunbury Orchid Society wish to announce that in July 1979, they will be conducting the first Regional Conference ever to be held in W.A. More details will be published in the next issue of the Review.

WHERE PARENTAGE COUNTS

WHITE CHRISTMAS 'SNOWDRIFT'

Exclusively owned true May-flowering tetraploid parent. Who else has a high-class May tetraploid breeder?

FANFARE 'ST. FRANCIS' A.M.

Converted early tetraploid parent. (Mericlone flasks available; approx. 25 plants for \$37.50).

WHITE CHRISTMAS 'SNOWDRIFT' x FANFARE ST. FRANCIS 'REGAL'

(Raceme and single flower illustrated).

First flowering seedling late May-early June, 1978.

We have a breakthrough in standards in our early tetraploid development. In this and following issues we will show parents and what they produced.

Remember, there is more to a clone than just the flower. One must ask "Will it produce?" and "Is the flowering time true?" Our early tetraploid development is most careful about this and this is "Where Parentage Counts".

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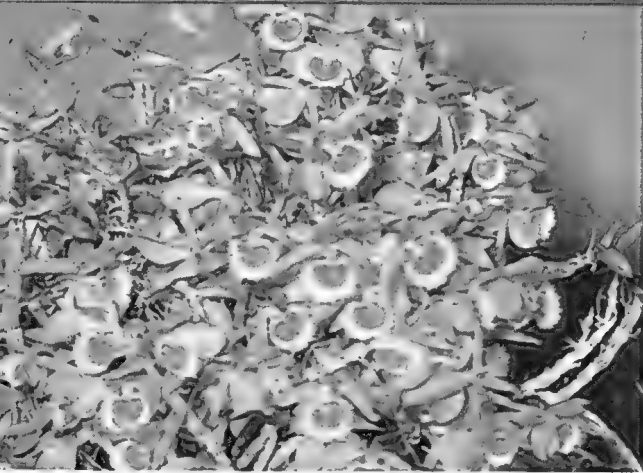
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***Dendrobium loddigesii* Rolfe**

GERALD McCRAITH

One of the gems in the family of *Dendrobium* is this easily-grown and delightful orchid species from China and adjacent Islands.

The plant is prostrate in its growth habit and remains compact. It may be suitable for pot culture, on a rough bark surface, or attached to a fern slab that will allow room for its creeping habit of growth.

This *Dendrobium* should be kept growing, even through winter, but at the beginning of spring, this species should be placed near the glass, or wherever it can get the maximum amount of sunlight and the watering must be eased considerably.

By early October, the leaves should yellow and fall in keeping with its natural habit of being quickly deciduous. The flower buds will initiate at this stage and provide a beautiful cover of flowers by early November.

The well-shaped flowers are up to two inches across, fragrant and reasonably long-lasting in the shade. The soft rose purple colouring with an orange disc on the labellum, make this species a very desirable orchid that should be in every collection.

107 Roberts St., Essendon, Victoria 3040



***Oncidium sphacelatum* 'Inez'**

PHYLISS COTTON

This huge specimen was grown by Mrs. J. E. Lingard of Welling Point about 30 km from Brisbane. It was awarded a certificate of Cultural Commendation. In all there were 78 spikes showering some 8,000 blooms. Flowers were a rich even-yellow. The clone measured nearly a metre in diameter.

Mrs. Lingard has had the plant about twelve years. It was last repotted in December, 1976, being placed in 30 cm by 60 cm wire basket half-filled with large charcoal.

The plant was then returned to its growing situation, out in the open grounds surrounding the home, getting full sunlight up to about noon and no afternoon sun at all.

It was watered weekly, except that if the day was excessively dry and hot it would receive a light spraying.

Fertilising took place weekly using "Aquasol" or "Zest". It received a spraying of "Omite" and "Benlate" once a fortnight.

On the flowers beginning to open the plant is taken inside the bushhouse to prevent rain damage.

Gems among the Orchid Species

In Search of *Cymbidium* Optimums

Part III
ALVIN BRYANT

If cymbidium growers are to achieve optimum flowering then no time should be lost in finding out more about the correct time and conditions for flower initiation. For a plant to flower certain physical requirements must be present before environmental changes will become effective in triggering the initiation. Some of these physical requirements are the result of culture planned in advance and for this reason it is essential that initiation time must be known. This information is the focal point about which our culture must rotate.

It is customary when a certain piece of knowledge has to be determined to adopt a procedure whereby all the variable factors involved are held constant other than the one which will be systematically varied. When the results have been recorded this factor will be held constant but another will be systematically varied and so on. This procedure will be repeated with the level of one of the constants altered until the end result is one which can only be time consuming and costly before comprehensive data can be compiled. The question must be asked whether or not there might be a relatively simple way of determining the precise time of flower initiation before undertaking the lengthy task of determining the requisite range of the other variables.

If we look at what is known at present about flower initiation (keeping in mind the fact that I may not have seen some key articles) it seems to be accepted that it occurs when the temperature drops into the low fifties on the Fahrenheit scale. This however, is conditional for the plant must be of mature size, predisposed to flowering as against vegetative growth by adequate levels of sunlight, with nitrogen levels below a certain level and phosphorus levels above a critical minimum. Other factors operate also, otherwise growers would not have to be concerned whether a plant was shy flowering or not. Overall, everything is very vague and the question is how do we begin?

One article I read stated after a series of tests that no standard cymbidium flowered if it had been held continuously at a temperature which did not drop below 65°F. Assuming this to be correct it could well give us our starting point for growers over time have

worked out cultural methods whereby they can be sure certain clones in their collection will flower. If these clones are chosen and the cultural methods held constant with only the temperature being varied some significant results may well be obtained. The following suggests a plan for doing this.

Choose 135 plants which are considered to be certain flowering prospects for the following season. (Ideally the number should be greater and the plants should all be mericlones of the one variety.)

Divide the plants into three groups and place forty five of them into a temperature controlled environment whereby the minimum temperature is kept above 65°F. Care should be taken to see that the groups have identical treatment. Time of potting, potting mix, light intensity, air movement, spacing apart, water, fertiliser, etc., should all be matched with only the temperature control of one group being variable.

The choice of the month for the starting point is a guess but let it be the end of May. At the end of the month remove five of the plants grown under temperature control, tag them and place them in the unheated section. Repeat this each month until all the plants have been removed from the heated section.

It is anticipated that the first batch of plants taken from the heated environment will flower in the normal way. Successive batches should flower also but after a certain point it is anticipated that none of the successive batches removed from the heat will subsequently flower. This should give the latest point at which flowering will initiate.

With forty five of the remaining plants a reverse procedure is adopted whereby at the end of each month five plants are tagged and placed into the heated environment until all these plants are in. Here, it is anticipated that the first batches will not flower but a point will be reached whereby all the subsequent batches placed under heat should flower as if they were still under normal temperature. This should give the earliest time at which flowering will initiate.

The remaining forty five plants represent a control group and they remain untouched under the normal flowering conditions. All the plants should have temperature, humidity and light intensity continuously monitored

so that a comparison can be made with the flowering results. For instance there would almost certainly be a certain length of time for a certain temperature drop to become effective in bringing about initiation and this would be indicated. It seems likely that flower initiation would be able to occur over a fairly wide range of time to enable a temperature drop of sufficient duration to occur. Again, certain unavoidable changes may occur in the plants under heat which may adversely affect the results or spike initiation may be capable of reverting back to vegetative growth. Also, the extent of temperature drop rather than the actual lower level may be a factor. Whatever readings can be taken will be of importance for they may yield some further clues.

If the temperature requirements for flower initiation can be determined accurately then we have our starting point for varying each of the other initiation requirements to determine their limits. Today, with mericlone populations readily available, leaf tip analysis for nutrient monitoring a low cost service and environment control aids ready to hand the precise information for optimum flowering can be advanced a long way by those who love to face a challenge.

18 Kangaroo Point Rd., Sylvania 2224

ORCHID SPECIES SOCIETY

The Spring Show again this year was staged in the Theatrette at Brisbane's lovely Botanic Gardens.

Species orchids from all parts of the world were exhibited by orchid enthusiasts in and around Brisbane, and a plant of *Paph. venustum* — three blooms of a very good form, showing extra large spotting, owned by Mrs. L. Kench, took the honour of Champion Orchid of the Show.

The Novice Champion went to *Paph. villosum*, carrying three blooms, tabled by Mr. and Mrs. L. Irving. This achievement gained the Don Carnegie Memorial Trophy.

The Champion Specimen of the Show, possibly attracted the most attention — if only in amazement as to how anyone could grow such a plant free from blemish — the plant *Den. delicatum*, measuring at least 2 m across, and about 80 cm to 90 cm high, just a mass of blooms — owner Mr. John Cash. It was growing in a special wire basket, and carried on waterpiping poles in the back of a truck. Mr. Cash received this plant of about 4 cm in size, approx. 11 years ago. He has managed to show it at three shows in the Brisbane area over the last three years, but now on account of its size, has little doubt if it will be possible to transport it to any future shows.

In recognition of John's cultural achievement, he was awarded a Certificate of Cultural Commendation by the Q.O.S. about three years ago.

Proceeds from this show will be donated to the Australian Orchid Foundation and the Queensland Guide Movement.

Minicymys at Maryborough

A. WALKER

While reading through the back copy of the December 1977 issue, I noticed an article titled "How far north with minicymys" and a request for growers north of Brisbane to report to the A.O.R. their experiences. Having been transferred in 1973 I now live in Maryborough and once again have had an excellent flowering of minicymbidiums.



A novelty cymbidium doing well at Maryborough. Photo: A. Walker.

Before coming to Maryborough I lived in Gladstone where I first became interested in the minicymys. My first plants were *C. Mystique*, *C. Pelleas* 'Turantot' and *C. Showgirl* 'Mem. Rose Greer'. I had difficulty in growing and flowering at first but I was determined to succeed. This was overcome by using a different type of cymbidium mix, by shifting the plants to the northern side of the orchid house to take advantage of the afternoon breeze, and misting in the evenings between November and March to reduce the night temperature.

All plants were grown on the external section of the orchid house. We had problems with water which effected the roots, so I changed to tank water.

Having experimented for three years I was confident of success and the plants were looking good. I was more than pleased when several plants flowered including the standards and have done so ever since my first flowering in 1972.

I have enclosed a slide of *Min. Cymbidium* Showgirl 'Mem. Rosl Greer' which flowered in 1972. It had 11 spikes with 123 blooms.

Here in Maryborough, popularity is growing towards the mini-cymbidiums with several plants on show at the September Orchid Show.

Species *Cymbidiums* in Australia

JOAN STEPHENS

I am a hobbyist, growing under cold house conditions here in Melbourne.

In June 1975 I purchased the following species cymbidiums from an interstate commercial grower *C. eburneum*, *C. mastersii*, *C. devonianum*, *C. cochleare*, *C. aloifolium*, and *C. lancifolium*.

Of these I have lost *C. aloifolium* but the others are all thriving. I grow these cymbidiums in the cold greenhouse along with my miscellaneous genera, which include Paphiopedilums, Brassia, Lycaste, Dendrobiums (including *loddigesii*, *pieradii*, *chrysanthum*, *nobile*, etc.), Odontoglossums, *B. massanganea*, bi-foliate Cattleyas, in fact anything that will grow and flower without heat, and is available!

C. lowianum and *tracyanum* are in almost everyone's collection here. In fact they have been rather looked down upon as being the "poor relation" but lately there has been a big upsurge of interest in species of all genera and it appears that they will be taking their rightful place as orchids to be treasured.

All the *Cymbidiums* species mentioned are grown in my normal cymbid mix, which consists of a commercially bagged mix containing peat moss, rice hulls and sand. To this I add small polystyrene beads (used in bean bags) and peanut shells to make my mix more free draining as I am rather heavy handed with the hose.

I must mention here that my greenhouse is not the conventional glasshouse. It does have a gable roof, 2.6 m at the highest point and 2 m at the sides. The size of the house is 3.66 m by 2.5 m, running north and south, and is constructed as follows — bottom 90 cm up is made of fibro cement sheets, then glass panels to the roof, the roof being pale green fibre glass. To digress here, when we constructed this house in 1968 and mentioned we were going to use fibre glass on the roof, we were told it just could not be done. The orchids would not flower under anything but glass! It always gives us a bit of a chuckle now to go around to the various growers and to see just what they are making of the material we were told would be no good.

All the cymbidiums listed here are growing in black plastic pots. I have found that my cymys do better in these, although I still use terra cotta pots for all my other genera.

Cymbidium tracyanum and *C. lowianum* are growing in 20 cm pots and flower regularly each season for me. The other species are all growing in 15 cm pots, and I have noted below my results since acquiring them.

- (1) *C. eburneum* first flowered October 1977 with two spikes — one bloom on each.
- (2) *C. mastersii* (syn. *Cyperorchis masterii*) first flowered April 1976, then April 1977 with one spike of seven blooms each time. This year there are at present two spikes showing.
- (3) *C. devonianum* has only flowered once — November 1976, one lovely pendant spike of eleven blooms.
- (4) *C. cochleare* (syn. *Cyperorchis cochlearis*) I have not flowered yet, but am happy to see it has put out a nice new shoot.
- (5) *C. lancifolium* this plant at time of purchase had four growths and added a nice new one last year. It first flowered November 1975 with one small spike of three blooms, November 1976 and 1977 each year with two spikes holding three and four blooms. Now again it is in bloom (March 1978). It has put up two beautiful erect long spikes carrying respectively eight and ten blooms. At present it has been in flower over three weeks.

My plant of *C. lancifolium* is not the usual "muddy" colour but is of a very attractive pale creamy green. Is there such a thing as an alba form of this plant, or is this just a paler colored clone? I hang the plant close to the roof of the glasshouse when it comes into bud, mainly to prevent slugs or snails from enjoying a feast and wonder whether this would affect the color. The flower markings are the same.

I have found these orchids immensely interesting to grow and am very pleased that apparently my conditions are to their liking. Growers had said to me that I would not be able to grow and flower these (no heat). Maybe they would do better if I were able to provide a little heat, but in my case it proves that success is not impossible.

47 Kemp Avenue, Mount Waverley 3149

How to Obtain Optimum Flowering with Cymbidiums

JIM MACKINNEY

Many orchid growers in Queensland still believe that it is not possible to grow and flower cymbidiums satisfactorily in that State. This of course is quite true for most of Queensland but in the south-east corner and areas of higher elevation such as Atherton Tableland, cymbidiums can be flowered quite well.

In years gone by quite a number of cymbidiums that were shy flowering varieties in the south were unloaded via the chain stores onto unsuspecting growers up here and this fact coupled with a lack of knowledge of correct cultural conditions gave cymbidiums a bad name. A visit to any of the recent spring shows of the Queensland Orchid Society would have shown cymbidiums grown and flowered just as well as in most other parts of Australia.

Because of our slightly warmer conditions in south-east Queensland people have tended to give their cymbidiums too much shade in an attempt to keep them cooler and this of course is the main reason for poor flowering. To obtain optimum flowering it is necessary to start with correct potting and nutrition of the plants, coupled with providing the correct environment.

Environmental conditions are without doubt the main factor for optimum flowering. The ideal conditions would be that the plant receive 60% to 70% sunlight all day long, exposed to every breeze that blows, especially south-east breezes that cool things down of a late afternoon; and the plants should be on benches 9" to 12" off the ground so that the breezes can blow under and all around them. Be sure that the plants are well spaced out on the benches so that the light can penetrate right into each plant.

A suitable potting mix for this climate is another essential, as some of the softer type mixes that are o.k. in the southern states will not stand up under Queensland conditions of high rainfall in the summer months. What we use and consider a good type of mix consists of 8 parts by volume pine bark; 6 parts peanut shell; 2 parts peat moss; 1 part fine sand. To this is added blood and bone, superphosphate, sulphate of potash and dolomite. We use plastic pots, but terracotta would do equally as well.

Ample water should be applied all the year

and the plants should never be allowed to get completely dry as this can result in a check to growth. During the warmer weather watering is best done late in the day as this assists in the cooling down of a night, which is another important factor for good flower production.

Repotting and dividing can be done any time during the year except for the three or four hottest months. Feeding can either be by regular monthly feeding with any of the water soluble type fertilizers or by one of the slow release products such as Osmocote or Agriforme tablets.

Spider mite can be a problem and a heavy infestation of mite can retard the plant's growth to such an extent as to affect flowering. Use of a miticide such as Kelthane will give control of mites.

Remember DO NOT try to grow cymbidiums in a nice shady place such as under the house or under the mango tree. Some of the older types, particularly some of the early season greens, will not flower well except in the higher elevations such as Toowoomba but the modern triploids and tetraploids will flower as well in South-east Queensland as anywhere else in Australia, providing the above conditions are adhered to.

87 Turton St., Sunnybank, Q'land 4109

ASPLEY O.S. (QUEENSLAND)

The Spring Show was held at the Aspley Opportunity School on Saturday 23rd and Sunday 24th September.

This society is only three years old. Its members are very enthusiastic, and many of the more experienced in the growing of orchids, organised numerous displays, but at the same time involved a number of new members, not so experienced, in the preparation and setting up of the plants. This section was won by Mrs. P. Steynson and her helpers.

Champion Orchid was *Vanda Thonglor*, carried two sprays, each six blooms. Owner Mrs. M. Barker.

Reserve Champion, *Cym. Baulkis 'Luath'* was tabled by Mr. Ross Morgan.

The children attending the school decorated saucers and tabled them in a competitive section. This was of great interest to these children, they felt they too had taken part in the beautiful orchid show.

Part of the proceeds will be donated to the school. The members of the society are very happy at being able to assist such a worthy cause.

ON TANTALIZING ORCHIDS

G. HERMON SLADE

Orchids are among the most difficult plants to kill; they grow, although slowly, with much determination and design: to finally kill an orchid is a feat that requires perseverance and a sort of innate skill, not found in all humans but present in others and it acts as a point of dichotomy between two main types of growers.

To kill quickly by a force such as fire or bushman's axe has no inborn devilry or fun: it is to those who skilfully tantalize an orchid, to "cat and mouse" it into a state of the endless orchid's efforts to escape the grasp and the seemingly hopeless fate from its predator "grower" who use their sophistry to perfection, that this article is directed.

Of the numerous ways to tantalize an orchid, one of the most successful and popular is to allow the plant to grow to strength sufficient to ensure its ability to put on a good performance when the trial and torture begins: this is usually when the orchid comes into flower and the torturer picks it up and addresses it in his own language. "Come and join us happy mortals inside the hospitality and cosiness of our own home". The orchid, shivering and praying for its life, is then exiled and carried off to an abode as exotic and strange to an orchid as can be. As the orchid coldly begins to realize that this situation is a really threatening one and is no expedient like a bomb shelter against a hurricane or a Noah's Ark against a flood. It appeals with all its available means against its fate by imploring in orchid language against its sentence of no food (which in Orchid language is paraphrased to "not sufficient light"), dry, still air and its distasteful supply of most objectionable static water; so different from the dews, the rain and the friendly drink-together it has learned to enjoy with its host tree, as is a crystal stream from a bird-cage bath. But our tantalizer is a man who does not listen to appeals; especially spoken in foreign tongue and with outlandish gestures. He decrees in his best innate imperial vernacular "How lovely you look on the fireplace or the lunch table within our living room: do you realize how lucky you are to share our lovely home with us? How honoured you are to be allowed to decorate our inner sanctum and to be presented to all our guests for the duration of your flowering".

The orchid tries to answer in its own serene expression, an impossible one to write or to speak with human tongue, for its vowels are the sound of dew forming, the sky sunlit by day, starred by night; and the embrace of its host: while its consonants are the sighs of the wind through the trees, the babblings of the stream and the ultrasonic discourse between the plant and its fungus mycorrhiza at its root frontiers. Our tantalizer knows none of this, nor does he want to, because were he to change from his humanized viewpoint of "What's good for me must be good for you too; he would lose his key to success in torturing orchids, his indoor captives. The orchid sighs and thinks "... were I but a flowering deciduous *Calanthe*, I could take this in my stride and beat the giant: better still, were I a *Stanhopea*, my body and flowers would be so large and impressive that his desire to use me to his devices would be matched by my transience and even more by my odour which would out-tantalize him for the three days that I produce it and then I'd be free ... Oh Mother Nature, Goddess of all God-persons and God-orchids, why did you make me so beautiful to behold in the eye of man, so mild of perfume so unable to defend myself; why have you so favoured and blessed our fortunate family members like carrion-odoured *Bulbophyllums*?"

And so the story goes on: of course the orchid did not quite die for otherwise it would not be a story. It is a vignette of a regular punishment and reprieve of a heartless human giant, a continually recurring ordeal sprinkled with Job's tears.

Of course there are many other ways to "Cat and mouse" orchids: constant drips or badly drained pots will ensure that there is adequate build up of bacteria and fungus pathogens to destroy every root: indeed this causes much amusement to our torturer who gloats over the crop of "keikis" he obtains as the orchid makes an ejaculatory attempt to escape its ordeal and penitentiary.

I must also mention a more humane but less successful attempt at torture death by an unknown grower: many years' ago a *Cymbidium* was picked aside, presumably with an unwanted cat — and I do not mean a "Catt."; but what here in the islands is called "Puskat" — transported and left in French's

Forest; a lonely desolate sandy bushland near Sydney — and abandoned. The cat probably joined its numerous co-exiles in bird hunting, etc., but the *Cymbidium* behaved in true orchid fashion. It adjusted to the harsh environment and sent its roots far and wide, barely under the surface, over an area of quite a few square metres: it even withstood a bushfire, and when found showed both the scars of its igneous ordeal as well as its determination to grow and to flower, for it had a new leafy growth and was in full bloom when found in its strange exile. It resembled an "Erica Sander" type of hybrid. It was pictured in "A.O.R." about 20 years ago.

Is there some compromise between exquisite torture and mutual love and appreciation between man and orchid? There surely is, but to know one must learn orchid language and lose human approaches to orchids as if they were human beings too. If they are enjoyed and viewed from the living room into their own environment, on a tree or even in an artificial but not orchid-unkind environment of pot, treefern slab or wooden basket, fully exposed to breeze, dew and rain; living with wild birds and friendly insects, they will lend their resiliency to become one of the most delightful companions and durable friends it is possible to imagine or to desire. Their tough nature will not make them die like an unfed canary, they will not kill living things like a neglected cat or dog. In much of coastal Australia they are so "at home" that provided the selection of orchid friends is made with forethought of ambient environmental compatibility, they will then live and love their human "confreres". Also, it is so much more easy to go out and walk among them in their own environment; even to enjoy an afternoon tea party with them looking on; than it is to set one's mind to undeterrable orchid torture, when neither side wins and only grimaces, writhings and despair ensues.

P.O. Box 797, Vila, New Hebrides

Fourth Regional Orchid Conference

The Fourth N.S.W. Regional Orchid Conference was held at Katoomba, 28th September to 2nd October, 1978. The Blue Mountains and District Orchid Society was the host society and the venue was the Katoomba High School.

Registrants were welcomed at a Cocktail Party on the Friday evening in the school assembly hall where the Spring Show of the Blue Mountains Orchid Society had been set up. With a glass in one hand and a camera in the other, one was free to admire the exhibits. Very fine native orchids and native hybrids were a feature of the show, from

an exceptionally fine *Den. speciosum* with very large wide open flowers to a minute *Papillilabium beckleri* with a spray of flowers barely 6 mm in diameter.

There were also exhibits of assorted natives and of exotics. A novel class which attracted a number of entries was for photographs of natives which grow in the Blue Mountains area. Prints in colour and in black and white of both terrestrials and epiphytes were displayed on a large board and attracted a lot of interest.

Saturday was lecture day and a most interesting day it proved to be. Dr. Fozzard of New England University told of the work being done there on tissue culture with a wide range of plants and the methods of propagation by this means. Work on orchid propagation has begun and it will be interesting in due course to learn what progress has been made in this field.

Other lectures covered viruses and their effect on orchids, the effect of proposed legislation on the use of pesticides, Australian Native Orchids, and a fine talk by Wal Upton on species orchids. Merv. Dunn of South Australia discussed Anticipated Trends in *Cymbidium* Hybridising. The lecture programme covered a wide field of interests, each splendidly handled by an expert.

Prizes won at the Show were presented at the Conference Dinner on Saturday night at the Katoomba Golf Club.

Those who chose to go to Jenolan Caves on the Sunday on a bus tour arranged as part of the Conference were lucky enough to have a perfect day for the trip. A barbecue lunch and a cave inspection contributed to a delightful day.

Those who didn't go to Katoomba for the Fourth Regional Conference missed a most enjoyable weekend.

MRS. MATTIE MERCER RETIRES

After nearly 15 years as Secretary of the Townsville District Orchid and Allied Plants Association, Mrs. Mattie Mercer has stepped down on reaching her eightieth birthday. She is still as active as ever in the affairs of the Association having been elected Senior Vice-President at the October A.G.M.

In her writings in the Association Bulletin, Mrs. Mercer shows that she enjoys her orchids with gusto — and more, that she enjoys meeting orchid growers.

As a mark of appreciation for a job well done the new President Mr. F. Tooth and his wife opened their home on the 21st October so that members could stage a surprise party for Mrs. Mercer. Part of the fun was the production of a tape by Association Patron, Mr. Percy Tucker, and his wife, stored with "This is your life" type memories, and this was presented to Mrs. Mercer.

Many tributes were paid to Mrs. Mercer from folk who travelled from far and near to attend, and there were many who could not attend but sent best wishes.

Folk like Mrs. Mattie Mercer are the backbone of any society: By selfless work over many years they make orchid growing a pleasant hobby for fellow members. Mrs. Mercer has earned the high regard of people far beyond the bounds of her own society.

SIXTH AUSTRALIAN ORCHID CONFERENCE

Tassie is Tops for Orchid Tourists

Tasmania has much to offer you. Mix the grandeur of its scenery, the splendour of its historical buildings, and the drama of its past; with the next Australian Orchid Conference and there is a recipe which only needs you to make it perfect.

These ingredients blend with a topping of creamy comfort, for Tassie cares well for its guests. Nice hotels and motels are strategically placed.

Hobart is full of interest, such as its nineteenth century docks and warehouses, gracious old stone houses, historical Battery Point and Salamanca Place, and the magnificent panoramas looking towards and from Mount Wellington.

Within an hour or so is the wonderful old town of Richmond with its beautiful stone bridge and Australia's first Catholic Church. Also its old gaol which many people believe to be of greater interest than Port Arthur.

Going south towards unique Bruny Island you can pass the monument to Robert Brown the naturalist who named 112 of our Australian orchids and over 3000 of our native plants. Brown was with the party which founded the first colony in Tasmania. Later he became the foremost botanist of his era.

Bruny Island is famed as the place where the early Pacific wayfarers, including Van Dieman, Cook, and Bligh, refilled their water casks.

West of Hobart is the magnificent Derwent Valley with wonderful towns like New Norfolk, which was first settled by displaced people from Norfolk Island, and Hamilton with its mellowed old stone buildings — many, alas, in bad repair.

Near New Norfolk are the hop fields whose flavour you would probably have savoured. Near too, is the famous Bushy Park where the first hops were grown, and the first trout introduced from England.

Further west is the Gordon River dam complex, and the old copper town of Queenscliff with its frontier atmosphere. From here a road leads to huge Macquarie Harbour on the west coast, famous for the penal settlement on which the novel *For the term of his natural life* is centred.

The rugged west coast has the active lead and zinc mining town of Roseberry, a large

old mining town of Zeehan which might be derelict if it hadn't become a virtual museum. Further north is the unique Savage River iron mine from which ore is carried to the coast by pipe in slurry form.

North-west Tasmania has busy towns like Burnie, Latrobe and Smithtown, set among pleasantly green little farms. Here Rocky Cape is a fascinating storehouse of terrestrial orchids, and around early summer there can be huge pink hillside patches of *Epacris impressa*.

Tasmania wildflowers are fantasies of form and colour. They include the endemic waratah species *Telopea truncata*, and the Christmas Bell *Blandfordia punicea* with its umbel of up to 20 large red and yellow flowers.

The lakes of the central mountains are beautiful and the Great Lake, largest of these, has been raised by earthworks to form a vast reservoir to provide power for the huge turbines which feed electricity to the aluminium smelters at Bell Bay.

Burnie has its large paper mill where fine papers are created. Another mill near New Norfolk produces a high percentage of our newsprint from huge stands of the giant eucalypts around Maydena.

Homely Launceston is a dignified town of some industries such as woollen mills, but is mainly a service town for rich farming surrounds. Its history is symbolised by the carefully preserved Franklin House and Entally House, the latter home of the Reiby family for over a century. It was built by a son of the famous ex-convict Mary Reiby who once owned the land around Martin Place, Sydney.

The East Coast is sparkling with beauty. Beaches and bushland around Bicheno are virtually virginal; red granite cliffs near Triabunna sparkle in the settling sun; and St. Helens is famous for its fishing.

When you go to the Sixth Australian Orchid Conference plan to see as many of these places as you can. Pre and post conference tours are being organised and will be announced in due time. However, you can plan your own trip because it is quite easy to take your car, and if you have it, your caravan across by ferry. Not expensive either. The boat trip is overnight and it is a unique experience to watch the mountains of northern Tasmania emerge with the dawning light.

AUSTRALIAN ORCHID COUNCIL AWARDS 1977-78

ORCHID OF THE YEAR

Brassolaeliocattleya Malworth 'Orchidglade',

AM/AOC. Owner: Mr. Ray Dean.

AWARD OF DISTINCTION OF YEAR

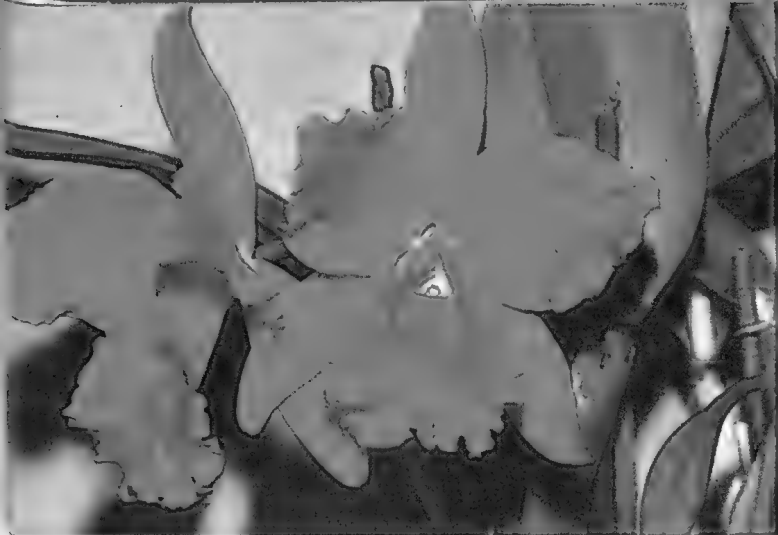
Potinara Carrousel 'Crimson Triumph',

AD/AOC-OSNSW. Owned by Mr. J. T. Neal.

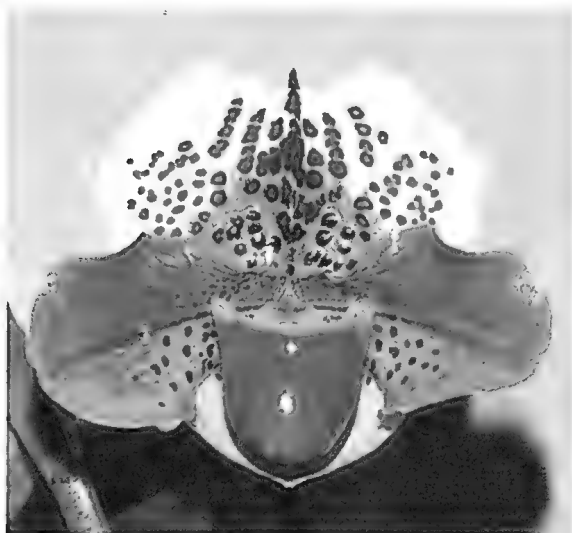
Full Award List for Year.

- 205 *Paphiopedilum* Woodruff 'Moorilla', HCC/AOC-OSNSW. Owned by Mr. J. L. Marks. Dorsal white with green at base. Petals — top half greyed orange, bottom yellow green, the whole spotted grey purple. Labellum yellow green streaked grey purple.
- 206 *Paphiopedilum* Joviella 'Moorilla', HCC/AOC-OSNSW. Owned by Mr. J. L. Marks. Dorsal white, edged greyed purple. Petals — lower edges green, top greyed purple. Labellum greyed purple shading to green at bottom of pouch.
- 207 *Euanthe sanderana* 'Katie', HCC/AOC-QOS. Owned by G. V. and M. B. Carter. Twelve open flowers, red-purple with splash of yellow.
- 208 *Lc. Hertha* 'Barbara', HCC/AOC-QOS. Owners: F. J. and B. H. Lorrimer. Two blooms Petals and sepals purple. Labellum purple with red-purple splash in tip.
- 209 *Blc. Indian Treasure* 'Bronze Glory', AD/AOC-OCSA. Owner: Mr. T. Burian. A striking cattleya of a tan-orange colour with a "shot silk" appearance.
- 210 *Sophranitis coccinea* 'Kam', HCC/AOC-OCSA. Owner: Mr. Ken Minne. A small plant bearing one red round flower with iridescent veining.
- 211 *Oncidium* Nonamyre 'Vili', HCC/AOC-OCSA. Owners: N. and E. Auliciems. Carrying one semi-arching spike with 16 shapely flowers, labellum a strong yellow, petals and sepals a pleasing brown striped with yellow.
- 212 *Paphiopedilum* County Fair 'Bambi', AM/AOC-OSNSW. Owner: Mr. K. Lansdown. Dorsal yellow-green fading to yellow then white on edge. Labellum similar to top half of petals.
- 213 *Potinara* Carrousel 'Crimson Triumph', AD/AOC-OSNSW. Owner: Mr. J. T. Neal. A striking red, awarded for the clarity and evenness of its colour. Texture good.
- 214 *Potinara* Rozanne Gayle Anderson 'Sikijaph', HCC/AOC-QOS. Owners: K. and P. Patching. One erect flower, clean and clear white. Labellum orange-grey with stripes of heavier grey-orange.
- 215 *Sophranitis coccinea* 'Rosea', HCC/AOC-VOC. Owner: Mr. Michael Derham. Two good sized flowers fully open of beautiful colour and veining, one partly open and one bud.
- 216 *Dendrobium* Claudia 'Katie Carter', HCC/AOC-QOS. Owners: G. V. and M. B. Carter. One spike with 25 flowers, well spaced and evenly coloured. Colour clean and glistening.
- 217 *Paphiopedilum* Blendmor 'Susan', AM/AOC-OSNSW. Owner: Mr. W. Hughes. A bold flower held well above foliage. Dorsal white with yellow green in centre, and greyed purple spots. Petal top half greyed red, lower half yellow green with few greyed purple spots. Pouch greyed purple. Ventral yellow-green.
- 218 *Laeliocattleya* Culminant 'La Tuilerie', HCC/AOC-OSNSW. Owner: Mr. R. Dean. Four flowers. Petals and sepals RHS colour 74C. Lip dark red.
- 219 *Cattleya* Eileen White 'Connells Point', HCC/AOC-OSNSW. Owners: Mr. and Mrs. B. M. Cardwell. Two large white flowers on a firm stem, yellow in throat.
- 220 *Cymbidium* Cleo's Melody 'Eldorado', HCC/AOC-OSNSW. Owner: Mr. Ray Dean. Nine large flowers well displayed on an arching stem. All white except for purple spotting on lip.
- 221 *Cymbidium* Susan Hughes 'Casey', HCC/AOC-OSNSW. Owner: Mr. W. Hughes. Eleven evenly spaced flowers on strong, slightly arched stem. Petals and sepals white with some green veining. Lip white with yellow keels and pink edges, with darker spotting.
- 222 *Potinara* Lemon Tree 'Yellow Magic', AD/AOC-OSNSW. Owner: Mr. H. E. Sheaves. Two upright flowers on a strong stem. All yellow with slight stripping of orange-red on lip.
- 223 *Lycaste* Shoalhaven 'My Choice', HCC/AOC-OSNSW. Owner: Mr. J. Apperley. Eight flowers and four buds, with five flowers and one bud on one bulb. Tepals red-purple. Labellum white with spots.
- 224 *Cymbidium* Mallana 'Memoria Caroline Hargraves', HCC/AOC-OSNSW. Owner: Mr. Colin Fraser. Well displayed flowers on a strong stem. Tepals yellow. Lip yellow with red margin.
- 225 *Cymbidium* Pearl Balkis 'Chailey', HCC/AOC-OSNSW. Owner: Mr. K. I. Black. Strong spike of nine pure white flowers. Labellum with yellow keels and red-purple markings.
- 226 *Ascocenda* Buddy Choo 'Lillian May', HCC/AOC-VOC. Owner: Mr. G. Woolley. Eleven shapely flowers. Tepals purple spotted with greyed red, with lower sepals orange. Lip greyed purple with side lobes yellow-green.
- 227 *Lycaste* Koolena 'Mary', HCC/AOC-VOC. Owner: Mr. A. H. Smith. Good deep colour. Tepals greyed purple, petals white tipped. Lip edged with white.
- 228 *Brassolaeliocattleya* Malworth 'Orchidglade', AM/AOC-OCSA. Owner: Mr. Ray Dean. The plant carried two perfectly shaped flowers of clear glistening yellow, complemented with a slightly deeper yellow lip edged with soft orange-pink.
- 229 *Cymbidium* Joyce Duncan 'Bevy Lou', HCC/AOC-VOC. Owner: Mr. Robert Lee. Ten fully open lovely clean green flowers on a reasonable spike. Lip background white with red markings.
- 230 *Cymbidium* Highland Mist 'Dillabirra', HCC/AOC-OSWA. Owner: Mrs. B. Gready. Nice shape. Petals and sepals white. Labellum streaked and spotted crimson. One more flower would have given AM.
- 231 *Sarcochilus falcatus* 'Miriam Ann', HCC/AOC-OSNSW. Owner: Mr. A. J. Merriman. Two spikes of eight and six white flowers well displayed. Yellow column and faint yellow stripes inside lip.
- 232 *Paphiopedilum* Canberra 'Roundelay', HCC/AOC-OCSA. Owner: Adelaide Orchids. Strong stem held flower above foliage. Strong, wide, and flat petals. Dorsal white, spotted red-purple blending into solid red-purple centre light yellow near base. Ventral yellow-green. Petals top half greyed orange, bottom spotted yellow-green.
- 233 *Paphiopedilum* Royale 'Camelot', HCC/AOC-OCSA. Owner: Adelaide Orchids. Flower above foliage on strong stem. Dorsal white striped red-purple with darker centre. Ventral yellow-green. Petals top half red-purple, bottom yellow-green. Lip yellow-green overlaid greyed orange.
- 234 *Cymbidium* Lynette 'Balin', HCC/AOC-OCSA. Owner: Mr. M. R. Chenoweth. A nicely presented miniature with five upright spikes displaying flowers perfectly. Flowers very round and filled in.
- 235 *Paphiopedilum* delenatii 'La Tuilerie', HCC/AOC-OCSA. Owner: Adelaide Orchids. A small plant with attractive dark green leaves, slightly mottled. One long strong stem held two delicate pink flowers, each having a lovely round pouch. Petals and sepals white with blush of purple-violet.

Some of the Australian Orchid Council Awards



▲ *Potinara* Carrousel 'Crimson Triumph', AD/AOC-OSNSW. Mr. J. T. Neal's flamboyant flowering of a very complex hybrid. The pod parent *Potinaa* Red Lava has the *Slc.* Anzac influence in its lineage, and the other parent *Cattleya* Leila Aronson has ensured a well filled-in flat flower.



◀ *Paphiopedilum* Blendmor 'Susan', AM/AOC-OSNSW. A fine clone from that superb grower Mr. W. Hughes. The parents are *P. Blendia* x *P. Moorheart*. Hybridisers have been striving for bright colours in paphiopedilums and this clone is a major advance.



▲ *Euanthe sanderana* 'Katie', AM/AOC-QOS. Well flowered by G. V. and M. B. Carter. Modern clones of this species have been bred from selected wild clones to produce improved forms such as this one.

◀ *Paphiopedilum delenatii* 'La Tuilerie', HCC/AOC-OCSA. A charmer from Adelaides. It has leaves as attractive as its flower. The species comes from Indo-China.

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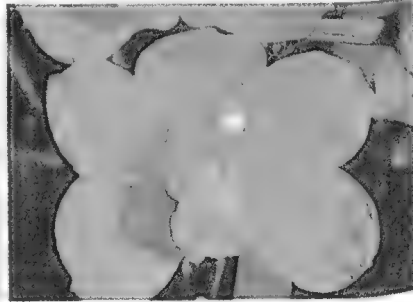
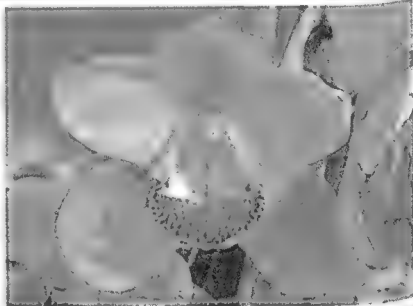
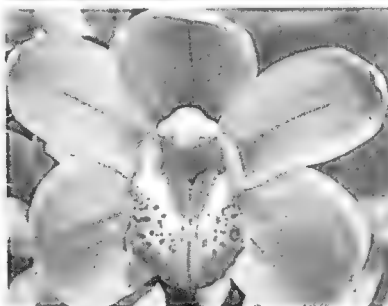
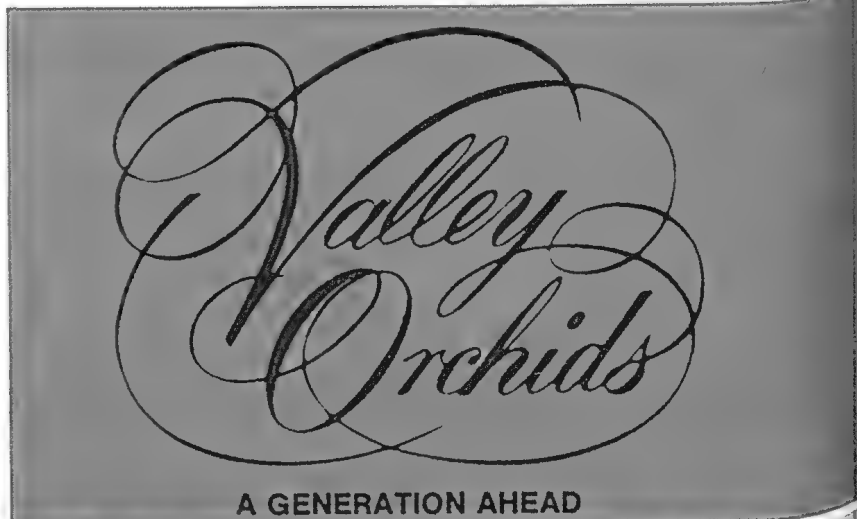
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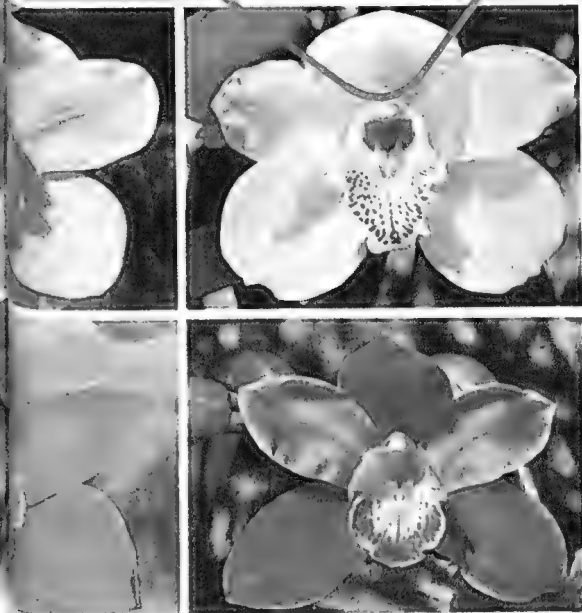
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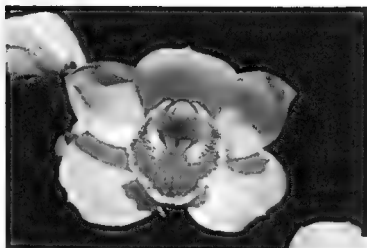
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DOREEN DARWEN No. 4
"MISS AVALON"



DOREEN DARWEN
"MISS AMANDA" H.C.C.

The Doreen Darwen's are delightful, raised from a cross made by Tom Henry at Dos Pueblos (Mary Ann x Arcadian Melody). Illustrated are just two of these terrific tetraploids, another we named "Masterpiece" will be produced later.

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WINTER FAIR "OLYMPICS" — Mid July Flowering	\$20
Leaves 8"-10" — Christmas Special, one of each for \$37.50 Post Paid in Australia.	

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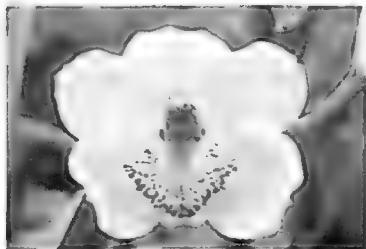
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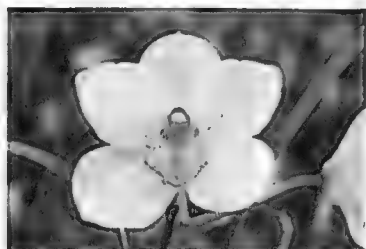
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MARY ANN "TOM HENRY"

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FOR COMPLETE LISTS
PLUS FLASK LIST.**



WINTER FAIR "OLYMPICS"

ORCHID TRAVELOG

ALOHA! ALOHA!

KEVIN McFARLANE

The 39th Honolulu Orchid Show was held on the 12th to the 15th October 1978. My wife Beth and I flew over to see for ourselves the latest hybrids and crossings of the future.

The big Show which is over one acre in area usually takes place during Aloha week at the Neil Blaisdell Centre. Aloha week is a week which commences with a big parade along Kalakua Avenue and is watched by thousands of tourists and local people. A feature that really impressed me was the High School bands. Although the sun was really beating down the clean cut kids with their colourful aloha outfits kept marching along beating out their music. Some bands had up to 160 members and of course there were many floats. These were of great interest as there is a ruling in Hawaii that all floats must be covered in at least 60 per cent of live foliage and flowers. Most were covered with live orchids and flowers.

I noticed a big change in Hawaii. Even in the last couple of years there are many, many more high rise buildings taking shape in Waikiki and some of the simple Polynesian charm has vanished. At first you are a little disappointed, but after a few days you start to feel the "lure of the Islands" — and the people are so friendly.

Fourteen Orchid Society members from New Zealand came over for the Show. We all attended the Honolulu Orchid Society meeting which has a membership of eleven hundred. Walter Lum is the president. Each of us was introduced and presented with an Orchid Lei. Herb. Hager from Mainland U.S. was guest speaker and showed slides and gave a commentary on the latest in phalaenopsis breeding and the new colours being created. There was considerable interest amongst the Hawaiians as not a great deal of phalaenopsis breeding is taking place on the Islands. Herb. is one of the real old time orchid growers and worked for many years with B. O. Bracey. The Show was set up on the Wednesday afternoon and night with judging on Thursday morning, followed by a judge's breakfast, at which I was a guest. Most of the displays were arranged in island fashion — each of different shape and size. Commercial growers, large commercial growers, small private displays, etc. These were all filled with shavings and after the plants were placed in position, it was then topped off with fine

dark fir-bark sawdust which gave a nice neat appearance. Very small amounts of foliage were used in the displays and a very noticeable thing, in almost every display, was the way in which the colours were separated. For example, all white or near white were kept together and then orange drifted into yellow and paler yellow to green. The same pattern was followed with the purples. This method of displaying is quite effective.

Clarence Kelly, a real nice happy guy of about 20 stone, had the tough job of Show Chairman — luckily he has the weight to throw around and did a great job.

Ben Kodoma reminded me of a kangaroo — he seemed to be hopping around helping out in everything. Ben could be called "Mr. Orchid" of Hawaii and does tremendous work looking after orchid visitors to the Islands. In this he gets a ton of support from two good workers — Dora Yamamoto and Violet Yamaji. These two girls escorted the N.Z. group to the different nurseries and outings and made their stay a happy one.

At the Show there were exhibits of flower arrangements, anthuriums, Ikibana, Bonsai, Cacti and Bromeliads. Displays, lectures and demonstrations were carried out right throughout the Show. There was also a large area for plant sales. Most of the nurseries in this area exhibited mother plants in bloom with seedlings for sale — others had large colour prints — approx. 12" x 12" — of the parent plant in front of the seedlings.

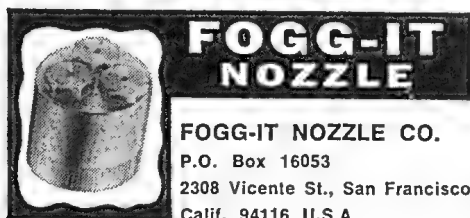
I thought this was a good idea, especially for newer growers as it gave them a better idea of what to expect from a cross. The plant sales section was a tremendous success and was packed with people most of the time. It was reported to me that the over-all sales amounted to \$42,000. Most seedlings were sold in community pots and were very reasonably priced. Compots of seedlings sell for about \$7.50 and mericlones for about \$20.00 or thereabouts. There's usually about 20 seedlings, or more, per compot. All plants for sale were paid to a single cashier and 33 per cent was deducted for the Honolulu Orchid Society. I strongly recommend this idea.

Approximately 12,000 paid tickets passed through the gates — entry price was \$1.50 with children under 12 years accompanied by an adult free.

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A remake of a good colourful cross. The pathway to bright colours here.
- PC2 WALLARA 'GOLD NUGGET' x SENSATION 'VIEUX ROSE' — FLASKS \$35.00 EACH.**
The best tetraploid yellow crossed with one of the best proven red diploids.
- PC3 VALYA CRAIG 'JUDY' x HAMSEY 'THE GLOBE' — FLASKS \$35.00 EACH.**
This cross and PC1 will produce the parents needed to produce top class orange tetraploid cymbidiums.
- PC4 VALYA CRAIG 'JUDY' x SENSATION 'VIEUX ROSE' — FLASKS \$35.00 EACH.**
The Valya Craig has yet to be proved as a breeder but the prospect is too good to miss. Expect a percentage of bold colours on high upright spikes.
- PC5 VALYA CRAIG 'JUDY' x WALLARA 'GOLD NUGGET' — FLASKS \$35.00 EACH.**
We feel sure that this cross will yield top show-bench yellows of intense colouration with high upright spike habit.
- PC6 SUSSEX 'LAELIA SASSO' x VALYA CRAIG 'JUDY' — FLASKS \$30.00 EACH.**
We expect to see many improved Sussex type flowers of larger shape on the nice tall Valya Craig spike. The Sussex is a colourful diploid and a proven breeder with bright yellow-orange striped blooms with attractive red barred labellums. Triploids expected in September to October.
- PC7 SUSSEX DAWN 'DOROTHY MAY' x POETIC 'ANDRE' — FLASKS \$30.00 EACH.**
The proven Sussex Dawn with the recently awarded top show and cut flower white, Poetic 'Andre' AM/OS NSW, should produce top triploid greens and whites with good arching spike habits and well displayed labellums. Expected to bloom in August and September.
- PC8 SUSSEX DAWN 'DOROTHY MAY' x SLEEPING BEAUTY 'SARAH JEAN' — FLASKS \$25.00 EACH.**
A novelty crossing — 50 per cent pure-colour blooms on nice arching spikes with plenty of dainty well shaped blooms a bit on the small side. Colours of the pure-colour progeny should be similar to those in the popular Sarah Jean cross, (pumilum 'alba' x Sleeping Beauty 'Sarah Jean'.) i.e. Apple greens thru to white. Spring flowering diploids.
- PC12 ANGELICA 'DECEMBER GOLD' x LUNAGRAD 'ELANORA' — FLASKS \$25.00 EACH.**
The Angelica is a similar shape and size to Lunagrad 'Elanora' (i.e. large, open, well displayed blooms 5½" across) but its colour is a clear non-fading yellow. Both flower during late June in South Australia. The Angelica carries 15 to 16 blooms on a massive spike which can be either arching or decorative depending on treatment given. A good early diploid combination.

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Champion Orchid of the Show was *Asco-cenda* Hawaiian Monarch owned by Susan and Rob. Perreira.

A nine course dinner was held at the Ming Palace Restaurant on the Saturday night. Guests from the Outer Island, N.Z. and ourselves were welcomed and presented with a lei.

We visited numerous commercial and private orchid establishments on Honolulu and Maui, and I must give full marks to the Hawaiians as growers. I would confidently say that they grow their plants about twelve months faster from flasks to flower than we do in Australia. I think they must talk to them. One of the main topics at the moment is a striped dendrobium — one of my crosses of which I sent a few flasks over to friends just on 18 months ago. Although we have had striped dendrobiums in Australia for about 8 years, this is the first time they have been seen in Hawaii, so there is considerable excitement and the lucky people that have a few plants are anxious to flower them. The first guy to flower a stripe in the Islands was Soup Nakata of La Haina, Mauri. Soup is an A.O.S. judge, and President of the La Haina Orchid Society. Arrangements are already being made to mericlone the plant.

Hawaii boasts of having over 1,000 restaurants, so with plenty of competition, food is reasonably priced — much more so than in Australia. One restaurant advertised breakfast on their bill-board as "two scrambled eggs, two small sausages, two pancakes with coconut cream or honey" — all for 99 cents. Coffee was 25 cents extra. We decided to give it a try and found it really delicious.

Shake the moths out of your pockets Australian Orchid Growers and have a look at orchid growing Hawaiian style. We all learn something by travelling.

TOWNSVILLE'S NEW MEETING PLACE

The Townsville Orchid Society meets every fourth Friday but recently changed to a new venue, the Souths Junior Rugby League Hall situated in Pioneer Park, just past the Herveys Range Road turnoff and a few yards along Ross River Road. Visitors and intending members can contact the Secretary, Mr. E. Boon, C/o P.O. Box 83, Townsville 4810.

TOWNSVILLE DISTRICT ORCHID & ALLIED PLANTS ASSOCIATION

Townsville's other very active society has also moved to new premises. It meets on the third Tuesday in the month at Aitkenvale Opportunity School, corner of Charles and Nathan Streets, Aitkenvale. Secretary is Mrs. J. Nott, C/- P.O. Box 677, Townsville 4810.

OUTSTANDING SUCCESS

Orchid Workshop

The Orchid Workshop sponsored by the Australian Orchid Workshop and the Orchid Society of N.S.W. proved that orchid growers are more than eager to learn all they can about their hobby.

It proved not only an educational day but an entertaining one too.

Just on 200 growers attended, most of them from Sydney, but many from as far as Newcastle and Nowra. A few came from other States.

The facilities at Hawkesbury Agricultural College were excellent and a wide range of horticultural equipment was on display. Those attending were able to select from a wide range of trade literature those which could be useful to them.

Lectures included a splendid coverage of botanical aspects by Mr. Wal Upton, Mr. Syd Monkhouse on cymbidiums, Mr. Barry Paget on vandaceous orchids, Mr. Gerald McCraith on the odontoglossum alliance, Mr. Bert Cardwell on cattleyas, Mr. Jim Neal on housing, and Dr. R. de Fozzard on meristem culture.

This proved an excellent panel of speakers. With the demonstration material available and the excellent facilities of Hawkesbury Agricultural, there was not a dull moment.

Throughout, the accent was on growing orchids to the best advantage and no one attending could have failed to add to their knowledge. The use of one theme gave the Workshop coherence, unlike a Conference where subjects are discussed without particular regard to their relationship.

Hawkesbury College catered for morning and afternoon tea, lunch and dinner. Efficiency of the catering was very helpful to the smooth running of events.

Many of those attending have asked that further Workshops be held.

Thanks are due to the Directors of the Australian Orchid Foundation for having the courage to support the project with a financial guarantee. Knowing the value of such a project to the ordinary orchid grower, they plan to extend the idea to other States.

Thanks are due too, for the smooth running of the Workshop to Mr. Keith Maxwell of the College, Mr. Frank Slattery, a Committee Chairman, Mr. Ian Chalmers as Secretary, and the ardent committee formed from representatives of the Australian Orchid Foundation and Orchid Society of N.S.W.

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D. Circ 'Gail' AM/AOS. Mericlone, 2" pot	\$7.50	Blc. Rising Sun. Mericlone, 2" pot	\$4.00
C. Pixie 'Canary'. Mericlone, 2" pot	\$4.00	Sic. Rosemary Clooney 'Nanae'. Mericlone, 2" pot	\$4.00
V. Hilo Rainbow. Mericlone, 2" pot	\$4.00	C. Guttata alba x self. Mericlone, 2" pot	\$2.00
C. Empress of Mercury 'Gwo Luen' AMAOS. Mericlone, (small)	\$7.50	C. Guttata alba x Blc. Helen Brown. Mericlone, 2" pot	\$2.00
Asc. Bonanza 'Bella Tew'. Mericlone, 2" pot	\$5.00	Blc. Tropical Market. Mericlone, 2" pot	\$2.00
Blc. Francis Hoshino 'Carticra Ruby'. Mericlone, 2" pot	\$4.00	Blc. Meditation x Blc. Helen Brown. Mericlone, 2" pot	\$2.00
Blc. Pink Cloud 'Cavaco'. Mericlone, 3" pot	\$15.00	Lc. Blue Boy x Lc. Blue Boy. Mericlone, 2" pot	\$2.00
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Angelica 'Advent' x Pacific Atoll — early greens — yellows. Showbench — export.

Pacific Atoll x Wiena Cindy — early large yellows — greens.

Angelica 'Advent' x Joan Luth 'Joy' — June-July — rose — reds — yellows.

PHALAENOPSIS COMMUNITY POTS of 10 Plants

Betty Conroy x Gladys Read 'Snow Queen' F.C.C.	\$25.00
Bruce Shaffer x Alice Gloria — superb whites — exhibition type	\$25.00
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STARTING WITH ORCHIDS — PART III

Summary of Some Popular Genera

RONALD KERR

If you have followed the advice of the first two parts of this series you will have been to some convenient nurseries, chatted with some established growers, joined an orchid society, and bought a few — a very few — flowering size orchids of the type which grow easily in your area.

CYMBIDIUMS

Years ago in the Sydney area when growers talked of orchids they meant cymbidiums. Fortuitous importations of seedlings from famous English nurseries during the war resulted in a range of good quality plants being available during the 1950's when public interest and buying power were high. The Sydney climate proved ideal for the new hybrids since they like moderate temperatures, ample water of around neutral pH, and cold nights in late Spring and early Summer. Further, they could be grown in simply made bushhouses — even under a tree or on a verandah.

Around Sydney cymbids were an automatic choice for new growers. And they are still the best beginner's orchids for the area. They can be made to flower well. The flowers last a long time on or off the plant and are decoratively superb.

They do not like areas where there is little variation between day and night temperatures, where days consistently exceed 33°C, or frosts are frequent. Humidity needs to be moderate to high.

Except for isolated patches these conditions broadly apply to the coastal strip from just north of Brisbane to Melbourne and northern Tasmania, and to the vicinity of Adelaide and Perth. They can be grown where climatic extremes exist but the grower must create the conditions they require. This is true, of course, of other genera too. Creating such conditions invariably means expensive growing houses, also bills for heating and cooling.

Sometimes creation of the right conditions can be cheap, as in a dry area where humidity can be induced by keeping 30 cm of wet sawdust on the floor of the growing house.

Having done the rounds of orchid nurseries in your area you should know whether cymbidiums are for you.

CATTLEYAS

The March 1978 issue covered this genus

and allied genera and it should be referred to for cultural details.

Cattleyas are exquisite and spectacular orchids. They do well in Queensland but are widely grown in all populated parts of Australia. The cooler the climate the greater the need for a hot house, but some members of the Alliance will do well under cool conditions. Some bifoliate cats for instance, and also most laelia species.

A major division occurs between those with one leaf per stem and those with two. Also between those which flower in Autumn and those which flower in Spring. Hybridising between these four divisions has been common so that it is possible to have a collection in which plants are in flower at any time of the year.

The Autumn flowerers build new growths in Spring and Summer, then rest in Winter when heat is not vital to them. Spring flowerers continue to build up growth in Winter and will require a minimum 13°C at nights.

If you live on the far north coast of N.S.W. or points north the cats may be a good beginner's orchid. Elsewhere depend upon your friendly local orchid nurseryman to advise you on the cool growing members of the alliance.

PAPHIOPEDILUMS

To many people paphiopedilums are an acquired taste and with some they are a devouring passion.

The species and the show types are always attractive. Many of the in-between hybrids can lack colour and texture, or have short stems and contorted shapes. Therefore clones of this genus are not ones to buy without having seen the flower and liked it.

Show types are expensive because propagation is slow. Some excellent species are available at reasonable prices.

Most are cool growers, the range from 13°C to 25°C being optimum. Those with mottled leaves are attractive but need warmth in Winter.

They require less light than other orchids and yellowing of the leaves is a sign of over-supply. A well drained compost is essential and it needs to be kept continually moist. Plants should have good air circulation but not draughts.

Growing Cymbidium Orchids at Home

A complete cultural handbook
by

Lance A. Birk

This comprehensive, fully illustrated booklet is the only complete source of information on growing Cymbidiums, the most popular of orchids.

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- How to divide and repot.
- Where to go for help and information.
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While written for the beginner, this colourful, easy-to-read, 48-page booklet will tell you everything you need to know to grow beautiful, healthy Cymbidiums. Also, learn how to enter shows, make your own hybrids, and treat your plant's illnesses. Good in any country where Cymbidiums are grown.

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ROY DEANE

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Detailed culture is a matter for a future issue. Meantime you will be safe buying a few plants of species which have been properly potted just long enough ago to now be established. Do not buy a plant with less than two strong growths and a new one coming away. Recommended species are *P. insigne* which has a flower ideal for a corsage spray; *P. fairrieianum* which has an impish daintiness; and *P. spicerianum* attractive for its wide white dorsal and wavy petals.

Paphs come from Asia and they have a related genus in the northern American and European hemisphere known as *Cypripedium* which is rarely seen in Australia. Also South American cousins, of which *Phragmipedium caudatum* and the hybrid *P. Sedenii* are in some collections.

NATIVE ORCHIDS

Many of today's most enthusiastic growers have first had their orchidaceous appetite sharpened by having been given a few natives. Some sturdy natives are easy to grow, particularly if the climate is similar to their natural habitat.

There are legal restrictions in all States on their acquisition from natural habitats. The safe course is to buy them from licensed nurseries or obtain written permission to collect them from private property.

Legal restrictions do not apply to man created native hybrids and more and more of these are becoming available each year. Most are improvements on the parents. Outside the tropics the beginner is advised to buy hybrids of which one parent is *D. speciosum*, *D. kingianum*, *D. tetragonum*, or *D. fleckeri*.

These will reward him with easily grown plants which can be built up to specimen size and produce masses of small to medium size flowers.

The tropical natives would be difficult for a new grower unless he lives there and has a suitable host tree. Elsewhere a growing house in which the climate can be influenced is a necessity.

The same safe rule applies as with other genera; if in doubt whether a plant will flourish under your *existing* conditions don't accept it. You need the fun of early successes so don't take the risk of frustrating failures.

HARDCANE DENDROBIUMS

This group contains our natives *D. bigibbum*, *D. discolor*, *D. dicuphum*, and their natural hybrids, as well as a fantastic range from New Guinea and Asia. Most are Autumn flowering.

Hardcanes have a marked annual growing rhythm and therefore are best left until you have had some experience with other orchids.

VANDACEOUS ORCHIDS

This alliance is distinguished by plants which have monopodial growth, that is they grow upwards instead of from a creeping rhizome. It includes spectacular genera such as *Vanda*, of which some species have strap-like leaves, and others round — or terete — leaves. Hybrids of the two have semi-terete leaves.

The round leaves indicate species from hot, sometimes dry, areas, as round leaves are nature's way of minimising the effects of too much light. Conversely, strap-leaf species do not need quite as much light, and some, such as *V. tricolor* and *V. coerulea* will grow in a cool glasshouse as far south as the Sydney area.

Cultural details will be covered in future issues. Beginners in suitable areas will find them a good alliance to commence with because the terete can be grown in full sun, and the strap-leaf hanging from the branches of a backyard tree.

Although housing in such areas may sound a simple matter such simplicity is advisable only for your first few established plants. Vandaceous seedlings are slow to mature and need special care.

Fortunately flowering size plants such as *Vanda tricolor* and its variety *suavis* are relatively inexpensive.

Vandaceous genera include *Rhynchostylis*, *Ascocentrum*, *Saccolabium*, *Aërides*, and *Arachnis*. These have smaller but more plentiful flowers, and, in general, a smaller growth habit. Many intergeneric hybrids are now available. In particular the neatly sized genus *Ascocentrum* crossed with *Vanda* produces the smallish hybrid genus *Ascocenda* which has intermediate sized flowers of good shape and colour.

One of the most beautiful species in the alliance is *Euanthe sandarana*. It has the habit of a vanda but differs markedly in the shape of the lip. Hybrids of it and *Vanda* are known as *Vandanthe*.

HOUSING

So far only a few of the horticultural genera have been described and you will have realised that, apart from those that like the climate of your area, the most important controlling factor is the type of housing you have for them.

The principles of housing will be dealt with in a coming issue.

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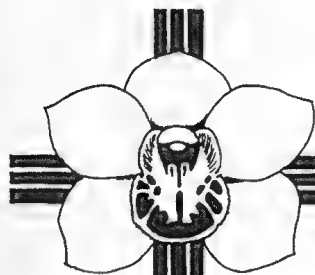
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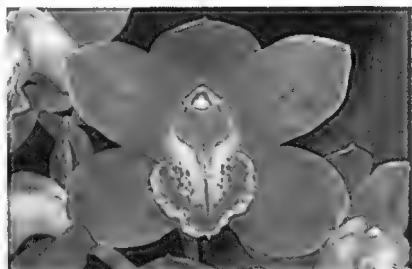
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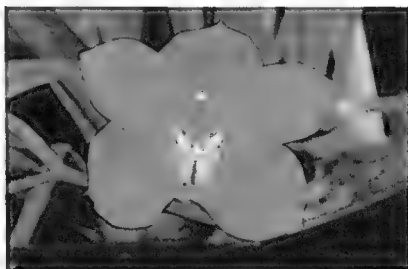
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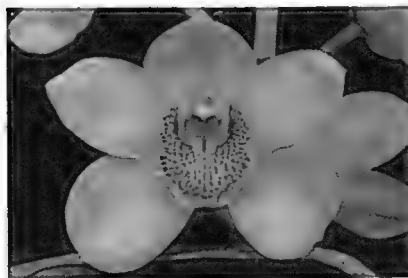
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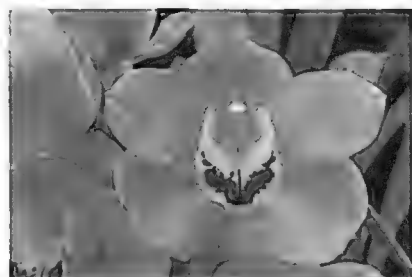
SOVEREIGN HILL 'BALLARAT'



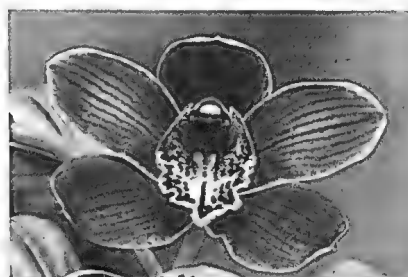
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Growing Cymbidiums in Launceston, Tasmania

DOREEN SCOTT

The "home" of my orchids is a two sided glasshouse built on the end of a large double open fronted garage. It measures 21 ft. in length 15 ft. wide and 15 ft. high. It is of peak roof construction, and is built up on pillars to overcome the natural slope of my garden. Access is from a door at the back of the garage, which also provides a lot of my ventilation. The back wall which is the rear wall of the garage is made of fibro sheeting. The floor is concrete as are the benches which are about two feet wide, and are situated all round the perimeter and about 2 ft. 6 ins. from the floor. They are built like shallow troughs and are filled with coke on which is growing a water cress type of moss, and this gives me the humidity I require. Eight ins. above this bench I have a framework of steel weld mesh, and on this my pots stand giving free access of air underneath as well as acting as a deterrent to any bugs which may be lurking in the coke and moss.

I have three ventilators on the north east side consisting of full length louvres, and two on the north west end, and a further small louver high up on the peak. I also have three ventilators situated under the benches with sliding shutters which allows floor ventilation. These I keep open all summer and closed during the winter.

To heat the glasshouse I installed four 7 ft. double banked tubular heaters which stand on the floor at the inner edge of the concrete benches. They are connected to off peak electricity and are thermostatically controlled. Even with our rather severe winters in Launceston, I find this sufficient to control the natural night temperature drop to give me a minimum temperature of not less than 38-40°F, even on very cold frosty nights. As an additional precaution I have lined the inside walls with polythene sheeting.

The front of the glasshouse catches the sun nearly all day but unfortunately a few years ago my neighbour decided to extend his garage, which adjoins mine, a further 17 ft. and in spite of vigorous protests on my behalf, I found one end of my glasshouse completely bricked up to within 6 ins. of the ridge cap. This was a severe blow to me, as not only did it deprive me of a through current of air from end to end, but I lost the early morning sun and light which is so important to good growing. I therefore had to try to combat this loss

as best as I could now that my glasshouse was reduced to a two sided affair, so I installed first of all an Xpelair fan high up in the ridge of that end, and also a large slow rotating fan approx. 1/3 of the way from the bricked up end and high in the roof to stir the air inside the house. This latter device has to be used carefully, as I found when the spikes were growing, too much use of it tended to make the spikes twist and distort. I have the peaked roof covered with sarlon cloth.

I find orchid growing most rewarding, as well as a continual challenge. I have used the same compost for 25 years, and found my plants seem to thrive in it. My compost comprises of leafmould, myrtle for preference, fir bark, peat moss, she oak needles, oak leaves, and sand, to which I add a little blood and bone, and a small quantity of well matured poultry manure.

During the hot weather I pour on the water to my plants every day, making sure that the leaves are thoroughly wetted, as I believe this helps to keep away red spider. As the hot weather cools off, so does my watering, until during winter I only water once per week. With my feeding programme, I prefer to feed once a week, using half strength fertiliser, as against fortnightly using full strength. I water prior to feeding, and 36-48 hours later water well, to wash any build up of salts. I use a varied selection of fertilisers, such as animal manures in liquid form (very weak) Aquasol, Grolush, Fish emulsion and Nitrosol.

I spray my plants about twice a year with Cleansel and whiteoils, and I find that this keeps them in good healthy condition. Finally I believe the more care you give your plants, the better your results will be.

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BOOK REVIEW

*Orchids of Papua New Guinea
an introduction*

Written by Andree Millar. Photographs in colour by Roy and Margaret Mackay. Recommended Australian price \$9.95. Published by Australian National Press.

This is the coffee table book of orchids superb. And not only for the orchidophile because it is sure to end up in many a beauty lover's library. It will be a useful book for anyone travelling in Papua New Guinea.

The illustrations will make a nature lover drool. The text is not too technical and is at times racy. Typography and paper are excellent, and print quality acceptable, although some loss of sharpness is apparent in a few illustrations.

Having said all this we must comment: It will not satisfy the botanists. Not that it was meant for botanists. The sub-title clearly states "an introduction" and it is certainly such. However, there are errors the knowledgeable orchid grower will find irritating, including some spelling, transposition of a few captions, more than a few illustrations on their side and some upside down.

Further,, there are major errors which will mislead the orchid hobbyist and send the serious botanist berserk. These are mainly in the field of taxonomy, since many clones are incorrectly identified, some names misspelt, or synonyms used.

These nomenclatural errors are probably not the fault of the author because PNG orchid taxonomy is in a mess. However, the publishers would have done well to have submitted the page proofs to an authority such as Kew.

But even the most knowledgeable have difficulties because no serious work, on any scale, has been carried out there since the days of Rudolf Schlechter around seventy years ago. The Australian and current governments have never had enough cash to spare for such a luxury.

Cost for a thorough taxonomic project would now be so high that it might be beyond even a well-endowed private Foundation. And there are no Rogers, Rupps, or Dockrills available to do it for nothing.

Possibly the chief value of this book is to awaken the whole spectrum of its readers from coffee table folk to professional botanists — and hopefully some billionaire re-

search Foundation — to the need for intensive endowment in this area.

Andree Millar would have more knowledge of Papua New Guinea than any woman alive and there would be few men who have traversed the area more intensely. After many years experience as a botanical assistant at Lae Herbarium and Botanic Gardens she was appointed Curator to the University of P.N.G. teaching garden at Port Moresby, and built this up to the point where it is now recognised as the National Capital Botanic Gardens. For this work she was awarded the O.B.E.

She is currently engaged on a project to mericlone selected P.N.G. species for sale to the world.

No doubt this work will, as it deserves, run to a second edition and the discrepancies now apparent will be removed. Meanwhile, it is the only work readily available which, as "an introduction", or anything else, can be useful to the average orchidist.

It is indexed, has a glossary, contains some hints on culture, plus a little on photographing orchids.

Orchids of Papua New Guinea is recommended as a useful introduction to a vast field. It will make a fine gift and should find a place in every society library.

THREE CATALOGUES FROM THAILAND

Those who went to the Ninth World Orchid Conference know well the size and quality of the Thai orchid industry. Three fine catalogues received from Thai nurseries show in beautifully printed colour the wealth of vandaceous orchids and dendrobiums cultured there.

Largest, at 136 pages and cover, is from T Orchids. Every page is in full colour. A splendid range of seedlings, mature plants in species and hybrids, and mericlones, is logically presented and prices are clearly shown. This lavish production is a worthwhile item in any orchid library. It is available for \$5.00 American from T. Orchids, 30/71 Suthisarn Road, Inthamara 27, Bangkok-4, Thailand.

T. Orchids will provide a price list only free of charge.

A catalogue from Kultana Orchids is slim by comparison but shows a wonderful range of flowers in colour together with prices. It is available from Kultana Orchids, 17 Soi Sailom 1, Bangkok-4, Thailand.

The catalogue from Vipar's Orchids is smaller again but it too, is resplendent with quality orchids. Obtain it by writing to Mrs. Vipar, Vipar's Orchids, 108/2 Soi Mittrapard Sudhisarn Road, Bangkok.

All three catalogues should be in the possession of all who are interested in growing vandaceous orchids, hardcanes and Asiatic species orchids. The first two carry detailed information on packing and air freight.

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ORCHID SOCIETY OF N.S.W. AWARDS

The last N.S.W. Award list appeared in the March, 1977, issue, ending on Award No. 930. The Award No. date, name of plant, award gained, and name of owner are given in that order in the list below.

- 931 25/10/76 *Dendrobium* Anne Marie x *D. Fiona* 'Cecil Park', CC. Mr. and Mrs. J. Gulbis.
 932 28/2/77 *Ascocenda* Kohman x *Asceda*. Yip Sum Wah 'Lynette', HCC. Mr. R. Rothwell.
 933 28/2/77 *Ascocenda* Meda Arnold 'Daphne', AM. Mr. J. Lambert.
 934 29/3/77 *Blc.* Lucky Strike 'Joyce', HCC. Mr. H. Sheaves.
 935 28/3/77 *Paphiopedilum parishii*, AD. Mr. J. Latham.
 936 30/5/77 *Paphiopedilum* Woodruff 'Moorilla', HCC. Mr. J. Marks.
 937 30/5/77 *Paphiopedilum* Jovicalla 'Moorilla', HCC. Mr. J. Marks.
 938 27/6/77 *Blc.* Malworth 'Orchidglade', AM. Mr. R. Dean.
 939 27/6/77 *Paphiopedilum* County Fair 'Bambi', AM. Mr. K. Lansdown.
 940 27/6/77 *Potinarra* Carrousel 'Crimson Triumph', AD. Mr. J. T. Neal.
 941 25/7/77 *Paphiopedilum* Blendia x *P. Mooreheart* 'Susan', AM. Mr. W. Hughes.
 942 25/7/77 *Cymbidium* Sylvania 'Sonnet' x *C. Keera* 'Shirlene', EA. Mr. F. Sweetman.
 943 29/7/77 *Cymbidium* Bill Smoothey 'Granny Apple', EA. Mr. K. Black.
 944 29/7/77 Novelty *Cymbidium pumilum* x *C. Sensation* 'Elkay', HCC. Mr. N. Devine.
 945 3/8/77 *Lc.* Culminant 'La Tuilerie', HCC. Mr. R. Dean.
 946 3/8/77 *Potinarra* Jungle Fires 'Eldorado', HCC. Mr. R. Dean.
 947 11/8/77 *Cattleya* Eileen White 'Connells Point', HCC. Mr. and Mrs. B. Cardwell.
 948 11/8/77 *Cymbidium* Cleo's Melody 'Eldorado', HCC. Mr. R. Dean.
 949 15/8/77 *Cymbidium* Susan Hughes 'Casey', HCC. Mr. W. Hughes.
 950 25/8/77 *Dendrobium* Ellen 'Jayhurst', HCC. Mrs. P. Jagger.
 951 25/8/77 *Laelia cinnabarina* x *Epidendrum* Ed. Moore 'Jayhurst', AD. Mr. P. Jagger.
 952 29/8/77 *Potinarra* Lemon Tree 'Yellow Magic', AD. Mr. H. Sheaves.
 953 29/8/77 *Lycaste* Shoalhaven 'My Choice', HCC. Mr. J. Apperley.
 954 29/8/77 *Cymbidium* Goldenette 'Buttercup', AD. Wondabahi Orchids.
 955 29/8/77 *Cattleya* Spring Enchantress 'Connells Point', HCC. Mr. and Mrs. B. Cardwell.
 956 11/9/77 *Cymbidium* Mallana 'Mem. Caroline Hargraves', HCC. Mr. C. Frazer.
 957 18/9/77 *Cymbidium* Pearl Balkis 'Chailey', HCC. Mr. K. I. Black.
 958 18/9/77 *Lycaste* Koolena 'May', CC. Mr. F. Alcorn.
 959 4/11/77 *Ascocenda* (*Actm. curvifolium* x *V. Hilo Queen*) 'Chartelle', HCC. Mrs. G. Olson.
 960 28/11/77 *Ascocenda* Medasand 'Vesnah', HCC. Mr. H. G. Hansen.
 961 28/11/77 *Sarcochilus falcatus* 'Miriam Ann', HCC. Mr. R. Merriman.
 962 23/3/78 *Cattleya* Portiata 'Mel', HCC. Mr. R. Dean.
 963 27/3/78 *Lc.* Little Moe 'Hallye', HCC. Mr. R. Dean.
 964 18/5/78 *Oncidium* Palmyre 'Lynette', HCC. Mr. G. Banks.
 965 29/5/78 *Paphiopedilum* Uncas Moorilla, HCC. Mr. J. Marks.

- 966 29/5/78 *Paphiopedilum* Kay Rinaman 'Golden Touch', HCC. Mr. G. Marks.
 967 18/6/78 *Phalaenopsis* Lady Doreen 'Grace Adele', HCC. Mr. R. J. Monthomery.
 968 18/6/78 *Paphiopedilum* Lyrie 'Reflection', HCC. Mr. R. Trennery.
 969 18/6/78 *Slc.* Honolulu 'Enshino', AD. Mr. B. Long.
 970 26/6/78 *Paphiopedilum* Winston Churchill 'Indomitable', HCC. Mr. F. Dobson.
 971 17/7/78 *Paphiopedilum* Hunston 'Avoca', HCC. Mr. S. Condon.
 972 17/7/78 *Paphiopedilum* Danella 'Chilton', HCC. Mr. S. Condon.
 973 31/7/78 *Paphiopedilum* Colonist 'Wellington', HCC. Mr. S. Condon.
 974 31/7/78 *Paphiopedilum* Danella 'Splendent', HCC. Mr. S. Condon.
 975 31/7/78 *Paphiopedilum* Honey Gorse 'Chilton', HCC. Mr. S. Condon.
 976 14/8/78 *Paphiopedilum* Novisphere 'St. Pauls', HCC. Mr. P. Crutchley.
 977 14/8/78 *Paphiopedilum* Peter Black 'Emerald', HCC. Mr. F. Dobson.
 978 14/8/78 *Paphiopedilum venustum* 'Pardinum', HCC. Mr. K. Wilson.
 979 28/8/78 *Paphiopedilum* Sonoma 'Latin Beauty', HCC. Mr. W. Hughes.
 980 18/9/78 *Cymbidium* (Fairy Wand x Carisona) 'Shoalhaven', HCC. (Novelty cymbidium). Mr. J. Apperley.
 981 18/9/78 *Dendrobium kingianum* 'Betty', CC. Mrs. B. Pauley.
 982 18/9/78 *Paphiopedilum* Maudiae 'The Queen', AD. Mr. J. Marks.
 983 18/9/78 *Cymbidium* Nancy Brown 'Cookbridge', HCC. Mr. D. Jones.
 984 3/10/78 *Blc.* Sylvia Fry 'Essie', HCC. Mr. J. McManus.
 985 7/10/78 *Lycaste* Macama 'Doris May' HCC. Mr. F. Alcorn.
 986 7/10/78 *Lycaste* Macame 'Jocelyn', AM. Mr. F. Alcorn.
 18/9/78 Silver Medal for Display of Orchids. Mr. F. Alcorn.

LAUNCESTON ORCHID SOCIETY

Mr. Russell from Melbourne judged the Spring Show and commented: "The quality was very high, and the way the stands were displayed very pleasing. An excellent show which would hold its own with many seen on the mainland".

Mrs. D. Scott won twelve first prizes, including Grand Champion and Reserve Champion. Mr. Len Clark, a pioneer of orchid growing in Tasmania, won six first and four second prizes, also the Most Pre-Eminent Entry Award.

In the last issue the meeting night was incorrectly stated. Note that the Society meets at the Launceston Matriculation College, Peterson Street, on the third Tuesday of the month. Visitors are always welcome. Secretary is Mrs. H. R. Ferrall of 4 Luxmore Place, Launceston, Tasmania 7250.

EMERALD ORCHID SOCIETY SHOW

Emerald is inland from Queensland's mid coast and is a town of rising economic importance. The Spring Show in '78 was well supported by displays from Gladstone, Rockhampton and Clermont Societies, and the Capricornia Orchid and Foliage Club of Rockhampton which received the prize for best display.

Mr. Barry Paget travelled up from Brisbane to judge and entertained on the Saturday night with slides of his vandas and those of Bangkok, with details of his culture.

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THE SHOWS AND SHOW WINNERS

An interesting thing about this year's Grand Champs is that relatively few were cymbidiums. Most interesting cymbidium was *Cym. Captivation* 'Full Moon', Grand Champion of the Victorian Orchid Club Spring Show. It is one of the *Cym. Wallara* 'Gold Nugget' seedlings bred by Hodgins Orchids, and has *Cym. Mary Ann* 'Simplicity' as the pod parent.

Other seedlings sired by *Cym. Wallara* 'Gold Nugget', namely *Cym. Idolize* (= *C. Sussex Dawn* 'Dorothy May' x *Wallara*) and *Cym. Jubilation* (= *C. Borough Green* 'Conference' x *C. Wallara*) also did well and it is certain this breeding line is one to watch.

Success of two Yamamoto softcane hybrids as Grand Champs at three shows should invoke increased interest in this too long neglected dendrobe section. At the N.S.W. Spring Show the accolade went to *D. Yuki-daruma* 'King', and a clone of the same orchid also won at Redcliffe, a Brisbane suburban society. It is white with a dark eye.

The other Yamamoto hybrid, *D. Akataki* 'Queen', was Grand Champion of the Melbourne Eastern Orchid Society Show. Colour is a light purple and the wide lip carries a yellow eye.

ORCHID CLUB OF S.A.

Spring Show

The theme of the festival was "Orchids Around the World". The walls of the auditorium were painted by John Martin design artists to complement and set the scene for a magnificent display of orchids. The quality and presentation of the orchids was considered by many members to be the best staged by the Orchid Club of S.A. Inc.

The winning display was again won by Mrs. Barbara Clayton, Mick Chenoweth and Nick Packard. These exhibitors have been successful for several years, and their display was again very meritorious.

The most outstanding bloom of the show was *Cymbidium* Highland Mist 'Lalchere' grown and exhibited by Mr. Bill White. The plant and blooms presented to Bill's usual perfection. The plant gained the John Martin Cup and Trophy.

The most outstanding bloom other than a cymbidium was *Phalaenopsis* Polar Bear 'Highbury' grown and exhibited by Johnston Orchid Nursery. The plant held a lovely aching raceme of near perfect blooms and presented in excellent show condition.

The reserve champion cymbidium was *C. Highland Mist* 'Dillabirra' grown and exhibited by Dr. Eric Furness. The plant was very close in perfection to the winning cymbidium.

The champion winning division entries were: Open Division: Mr. Bill White's *Cymbidium* Highland Mist 'Lalchere'. First Division: Mr. Tom

Burian's *Cymbidium* Wallara 'Gold Nugget', presented in perfect condition with a lovely raceme of gold coloured flowers. Second Division: Dr. Eric Furness *C. Highland Mist* 'Dillabirra'.

The champion cattleya was *Cat. Mary Ann* Barnet 'Winged Victory' grown by Mr. Gordon Cottle. A large well filled in white cattleya that would have held its own in any company. It gained Gordon the Frank de Rose memorial trophy.

The best species paphiopedilum was *P. wolterianum*, a nicely grown plant with four flowers held on long strong stems. Mr. and Mrs. Len Medlin were the owners. The plant gained for them the Max Clayton Memorial Trophy.

Proceeds from the festival assist the St. John Ambulance fund. St. John drivers' assist members with their plants both in and out of the show with ambulance transport.

Tasmanian O.S. Spring Show

The Tasmanian Orchid Society's Spring Show held in Motors Pty. Ltd. Showroom, Macquarie Street, Hobart, was an outstanding success.

Considering the lateness of blooms this year Show Marshall, Jim Smith, I'm sure was delighted with the end result. All members co-operated and their participation assisted in making the show the success it was. Some eighteen displays of varying sizes were most effectively arranged with the Champion Exhibit "In a Japanese Garden" taking out the honours for Phyl and Chris Nicholas. The focal feature, a large plant of the climbing *Coelogyne cristata*, covered in white blooms, was the centre of attraction. This display was also awarded the A.O.C. Gold Plaque and the American Orchid Society Certificate.

Show Judge, Mr. Bob Hodgkins of Victoria, awarded Grand Champion to *Cymbidium* Mary Ann 'Simplicity' grown by new members Alex and Joan Streatfield whilst the Reserve went to *Cym. El Capitan* 'Mem. R. Chrisman' grown by the Nicholas's.

Plans are already under way for next year's Show to be held in conjunction with the 6th Australian Orchid Conference. A comprehensive Show schedule is now being printed and if you would like to be placed on the mailing list to compete in this exciting event, please contact Conference Secretary, Jack Longden, 54 Kellatie Road, Rosny, Tasmania 7018.

Orchid Society of W.A. Spring Show

Mr. and Mrs. L. Gale can be proud of their wins at this fine Spring Show, first the Grand Championship with *Cattleya* Lunar Orbit, a breeding from *C. Atherton* and *C. Bob Betts* made by Limberlost nursery, second, Reserve Champion *Cymbidium* Nancy Brown 'Cooksbridge'. The latter is quite an old cross but well grown and flowered it can still beat most brash new comers.

Best Novice Cymbidium went to a fine flowering of *C. Ann* 'Simplicity' by Mr. and Mrs. L. Munings. In the class for Cymbidium of outstanding colour, Mr. and Mrs. M. Davidson won with the seedling *C. Cariga* 'Canary' x *Wallara* 'Gold Nugget'. Best Cymbidium seedling went to a cross between *C. Christmas Glow* and *C. Rio Rita*, grown by Mr. M. Rice.

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The Ken Birk Award for three cymbidiums went to a fine grouping of *C. Highland Mist* 'Dillabirra', *C. Lillian Stewart Lady Rose*, and *C. Valya Craig 'The King'*, displayed by Mr. and Mrs. J. Fleming.

In the class for three species with the G. Hermon Slade Trophy as prize Mr. and Mrs. K. Rex won with a group originating from Asia, South America, and Australia, the soft mauve *Dendrobium pieradii*, the many coloured *Lycaste lasioglossa*, and *Dendrobium speciosum*.

The A.O.C. Award for the Most Pre-eminent Entry went to Mr. and Mrs. W. Janney for a fine specimen of *Dendrobium delicatum*.

Award for Best Display by an Affiliated Society was won by Melville Districts Orchid Society.

BUNBURY O.S. SPRING SHOW

Once again the Society's Spring Show was staged at the Bunbury Shopping Plaza.

It proved to be a great attraction for not only orchid growers but also for shoppers and many out of town and interstate visitors.

The quality and colour of blooms exhibited by the society's members was of high standard and the overall effect most gratifying.

Champion Orchid of the Show was *Cymbidium* San Francisco 'Meadow Mist' which was grown to perfection by Mr. and Mrs. T. Bodrogai.

Reserve Champion was *Cymbidium* Highland Mist 'Dillabirra' exhibited by Mr. and Mrs. L. Raebel.

Best Orchid other than Champion and Reserve was *Dendrobium teretifolium* exhibited by Mr. and Mrs. T. Bodrogai. This was an outstanding exhibit carrying over 200 blooms.

A cymbidium of outstanding colour was a seedling — Carigo 'Canary' x Wallara 'Gold Nugget', exhibited by Mr. and Mrs. M. Davidson. The plant carried two large sprays of bright yellowy-orange blooms and attracted many admirers. Best Orchid in Section B was *Cymbidium* Mary Ann 'Simplicity' exhibited by Mr. L. Mickle.

A presentation dinner was held at the Lighthouse Inn where all trophies were presented by the Society Patron, Mr. John Sibson, MLA.

Victorian Orchid Club Spring Show

This was a beautiful and impressive exhibition. Made so by the quality and quantity of the flowers and the hard work and artistic perception of those who set up the show, and the keenness of those who manned it.

Champion orchid was *Cymbidium* Captivation 'Full Moon' owned by Mr. R. Hodgins. It was bred from *C. Mary Ann 'Simplicity'* x *C. Wallara 'Gold Nugget'* by Mr. Hodgins. Reserve Champion *Cymbidium* was *C. Caledonian Rose*, a cross between *C. Dingwall* and *C. Western Rose*, from Mr. R. Martin.

Many splendid displays were staged by individuals, teams, and an affiliated society. A lone effort by a novice grower, Mr. G. Peterson attracted much attention, particularly his specimen plant of *Cymbidium* Gwen Sherman 'Arthur Fetzner'.

Messrs. H. Schultze and M. Derham featured Australian natives in their display, and Mr. R. Smith made a focal point of lycastes. In the display of Messrs. B. Clark and D. Morgan, eyes turned to an appealing cross between *Odontoglossum* Robert Strauss and *Odm.* Stirling. Mr. G. McCraith displayed a variety of genera including many clones from the odontoglossum alliance.

Melbourne Eastern Orchid Society, which stages a fine show in its own right, contributed a large display of multitudinous genera which included some grand specimen clones.

There were other displays of like importance and those who would seek further details look to the excellent October issue of the *V.O.C. Bulletin*.

President Mr. Bob Hodgins expressed his appreciation to all those associated with the Spring Show, pointing out that: "Without the help of dedicated members it would not be possible to stage the most prestigious exhibition of orchids in this State".

Great Show at Chadstone

The Melbourne Eastern Orchid Society Spring Show at Chadstone is probably the biggest conducted by a society below State level. The Society is a very active one and numbers among its members just about every leading grower in Victoria, as well as dozens of enthusiasts aiming to become a leading grower. Lots of keen workers too, anxious to be in the fun and excitement of running a terrific show.

Champion of the Show was *Dendrobium* Akataki 'Queen', owned by Mr. R. Martin of McBean's. This is a Yamamoto hybrid bred from *D. Permos* x *D. Konan*. Since a Yamamoto clone won at the N.S.W. Show and also at Redcliffe in Brisbane it seems that softcanes are at last coming into their own.

Grand Champion *Cymbidium* was *C. Etta Barlow 'Cabramatta'* owned by Dr. J. Coker. Reserve Champion *Cymbidium* went to *C. Jubilation 'Golden Strike'* owned by Mr. L. Vines. The latter is an orchid to watch. It is one of the seedlings from Hodgins Orchids bred from *C. Borough Green 'Conference'* x *C. Wallara 'Gold Nugget'* AM/AOC-VOC.

The flow of people was at times overwhelming and the show staff did a magnificent job under pressure. The financial result of this and previous shows, places Melbourne Eastern in a secure financial position, enabling the Society to make substantial contributions to various charities.

N.S.W. Spring Show at Roselands

The Orchid Society of N.S.W. and its affiliated societies again filled the vast Roselands Centre Court with a breathtaking array of orchids.

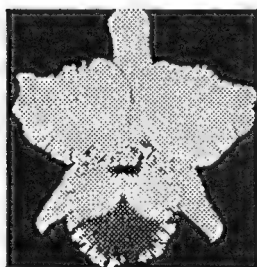
Grand Champion was a surprise: a softcane *dendrobium* no less. *D. Juridaruma 'King'*, one of the new Japanese hybrids beautifully grown by Mr. Harry Spence. It was predominantly white but had a dark eye. A piece of the same clone gained another championship for Mr. J. Carmody at Queensland's Redcliffe Orchid Society Show.

Mr. W. Hughes enhanced his shining reputation as a grower of superb cymbidiums by taking the Reserve Championship with *Cymbidium* Susan Hughes 'Judith', narrowly beating his own *C. Via Real 'Susan Hughes'*.

Champion *Cattleya* was *C. Eileen White 'Connells Point'* belonging to Mr. and Mrs. Cardwell. *Paphiopedilum* Sheerline 'Rondo' romped home as Champion *Paphiopedilum*.

Champion *Phalaenopsis* went to a seedling of the cross *P. Schneewittchen* x *P. Valledor* grown by Mr. H. Sheaves.

Champion native was a fine specimen plant of *D. kingianum* belonging to M/s B. Pauley. It was smothered in red flowers.



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The seedling watchers should note Mr. J. Apperley's *Cym.* Fairy Wand 'Carisona', and the polychrome cross *C. Kyhber Pass* x *C. Vieux Rose* 'Brownie' belonging to Mr. and Mrs. Gulbis.

Eleven affiliated societies contributed outstanding displays with North Shore coming a triumphant first, Eastwood second, and Parramatta third. Sutherland fourth, is always among the leaders. St. George and Bankstown showed improved form to finish fifth and sixth. Eastern Suburbs, Cumberland, Western Suburbs, Sydney O.S., and Berowra had attractive displays but lacked a wide range of genera.

In the spectacular native displays North Shore again triumphed, with Berowra second.

A notable individual display by Mr. F. Alcorn was awarded a Silver Medal. It featured his floriferous *Lycaste* Macama 'Sylvia' and *L. Kooleena* 'May'.

The Roselands management reports increased attendance due to the show and has invited the O.S. of N.S.W. to return again in '79.

Tweed District O.S. Show

The Spring Show of the Tweed District O.S. was held as part of the Tweed Banana Festival. Over 2,000 people flocked to the Autumn Club Hall in Murwillumbah to see a truly wonderful display of orchids. The judges were Mr. Russel Martin (McBeans) and Mr. Ray O'Hara (Tambourene Orchids).



Part of the Tweed Show.

The back of the hall was changed into a panoramic scene of the Tweed Valley. The great Mt. Warning featured on a mural which formed a fitting backdrop to a three-tiered waterfall surrounded by cascades of native orchids and ferns. The 'valleys' on either side of the waterfall were filled with cattleyas, soft-cane dendrobies, hard-cane dendrobies, phalaenopsis and native hybrids. This scene was complemented by a bark-hut which helped to show off the many vandas and ascos. which surrounded it. The cymbids and paphs were tastefully displayed at the other end of the hall.

The Grand Champion of the Show was a plant of *Dendrobium* Impact (with four long arching spikes) grown to perfection by Bert and Bertha Beadle.

Other outstanding plants included Mary Partland's *Blc.* Crispin Rosales No. 2 with one huge flower; the Beadles *Den.* Sunburst 'Tain', a magnificent plant of *Den.* Hastings grown by Mr. Ron Bailey, and a plant of *Den. canaliculatum* with over 60 spikes grown by our Secretary, Mr. Don Capner. Many fine clones of Japanese soft canes were also in evidence.

Newcastle O.S. Mattara Show

This Show was held in the old Frederick Ash Building in Hunter Street, Civic. Grand Champion, which was also Club Champion and Champion Cymbidium, was *C. Narella* 'Jennifer Gail' owned by Allan Smith. This was a really nice plant with two spikes carrying about 30 blooms and another spike not out, all in a 30 cm pot.

Champion Orchid other than Cymbidium was Reg Pilgrims *Cattleya* Sylvia Fry 'Supreme'.

Best Specimen minicym was *C. Evening Star* 'Bethlehem' with eight spikes in a 20 cm pot belonging to Norm Hellier.

Best Specimen Australian Native was *Den. kingianum* owned by G. Barrie. This was in a 17 cm pot and a mass of flowers, a truly nice sight as every cane had two aerials, each in full flower.

Best Specimen other than Native was *Max. Picta* — a very well flowered plant belonging to H. & S. Webb.

A novice, B. Denning exhibited six plants and finished with five Firsts and a Second, two Sashes and a Trophy. Not bad!

QUEENSLAND ORCHID SOCIETY

The Queensland Orchid Society Spring Orchid Festival covered the last two days in September, and Sunday, October 1st. This was during the period of the city's annual "Warana" (Fun in the Sun) celebrations, time of numerous civic activities.

The venue, the theatre in the new Botanic Gardens, Mt. Coot-tha, the entire gardens setting, surely lends itself to the showing of orchids.

Miss Warana, who had been crowned so, only a couple of days previously, officially opened the show on Friday morning. However, not only was the Q.O.S. honoured with her presence, for she was accompanied by Miss All Nations, Miss Moomba of Victoria, and Miss Blue Gum, of Tasmania, and these very beautiful young ladies took no time in entering into the spirit of the occasion, much to the delight of the members and patrons present.

Likewise various commercial growers combined a large and very colourful exhibit on the stage against a back-drop of rich blue/purple velvet, under the well known "Warana" colourful banner. This display showed off the high standard of orchids now available, and many of them being produced by Queensland nurseries.

A cymbidium tabled by the Toowoomba grower, Mr. B. Scott, gained the honour of Champion Orchid of the Show — Etta Barlow 'Opalescent' carrying one spike of eight blooms with bud — cream suffused pale pink.

Phalaenopsis Lady Jewel — owned by Mr. Eric Boston, was selected Reserve Champion. The plant presented one well displayed raceme of twelve large, good shape white blooms, with more buds to open.

Cat. Sylvia Fry 'Supreme' bearing two large flowers was awarded the lovely Cleland Cup — a perpetual trophy for the Best Cattleya exhibited at the Spring Festival. This plant was first in the lavender-toned cattleyas and owned by Mr. Graham Ireland of the Gold Coast.

The Best White Cattleya was *C. Ruth M.* Johnson entered by Mr. Doug Wanka of Redcliffe, whilst in the yellow coloured cattleya class, Mr. Clive Stark's *Blc.* Malworth 'Orchidglade', with three blooms, gained first placing.

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specimen plant of *Lc. Culminant*, owner Mr. Clive Stark of the Gold Coast, presenting approximately 84 blooms, was judged the Champion Specimen Orchid of the Festival, also awarded the honour of The Most-Pre-eminent Entry.

The Champion Novice Section was won by Mr. and Mrs. F. Irving for their entry of *Den. thrysiflorum* showing two lovely racemes of blooms.

The Redcliffe Orchid Society won the Affiliated Society's section, a much deserved placing because of its effective theme, quality and quantity of flowers.

Other Societies built up their displays around such themes as "Our Spring Bush House", "Beauty and the Beast", "Orchids for All Occasions".

Toowoomba's cut flower display around the theme "Happiness Is" attracted a lot of attention, likewise did the individual effort of Mr. F. Kelimeyer — conveying to the not so wise — the various methods of propagation.

With the closing of the Spring Show it is now preparing for the Autumn Show some six months ahead, but as time goes quickly by, there is no time to relent, if Orchid Shows are to be as successful as they have been in the past.

NORTH BRISBANE O.S.

North Brisbane Orchid Society presented their Annual Spring Show in the Fountain Courtyard of Toombul Shoppingtown complex.

The three day show over the last day of August and first two days in September proved an overwhelming success. This show being the first display of spring flowering orchids, attracted many orchid enthusiasts, all anxious to observe any new flowering hybrids that may be tabled.

A well grown plant of *Bc. Pastoral 'Innocence'*, carrying two shapely blooms gained Champion Orchid of the Show for Mr. and Mrs. S. Moran.

Den. speciosum bearing approx. thirty-five long sprays of blooms, was placed first in the Native Class, also Champion Native Specimen, owner Mr. John Cash, who is well known for his achievements in the culture of native orchid specimen plants.

Best individual display went to Mr. D. Rollinson, and in the section, a group of six orchids, first placing was awarded to Mr. D. Clark.

This society for many years has allocated the proceeds of one of their raffles to a local charity.

NORTH ALBERT O.S.

North Albert, a very newly formed Orchid Society, staged their first show in Oldmac Motors Showroom, Springwood, during the weekend of 16th and 17th September.

Much credit is due to the Executive Committee of this society in having such foresight, and being ambitious enough to stage a show after such a short period of the formation of the Society.

The response by orchid growers close to this suburb was great, and the portion of the showroom was filled to capacity with quality orchids.

Champion Orchid was a very nice *Pal. Lady Jewell*, carrying a raceme of 10 blooms with several buds in a 6-inch plastic pot of bark and charcoal, owner Mr. Eric Boston.

Reserve Champion: *Cym. Hamsey*, entered by J. and M. Zimmerman of the Gold Coast. The Zimmermans are becoming well known for their expertise in culture of cymbidiums in Queensland. It had a well presented raceme of 12 blooms, cream based with overtoning of rose/tan, showing a nice

darker red tone labellum.

Champion Specimen was a basketful of *Den. Bardo Rose* — in a delicate shell pink shade.

This specimen was the focal point in a display of all Native Orchids, and an exhibit such as this never fails to attract the attention of orchid enthusiasts, for most growers still have their favourite Australian natives growing in the portion of the orchid house most suitable to their habitat.

IPSWICH O.S.

The Spring Show was held in the Showrooms of Merrel's Motors, Brisbane Street, Ipswich, during the first weekend in September.

The City of Ipswich Annual Colour Carnival, presenting many activities of civic interest, was in full swing during the period of the Orchid Show, and this colourful array of flowering plants was a welcome addition to the programme.

Mrs. Llew Edwards, wife of the Deputy Premier, and the Minister for Health, officially opened the show.

Champion Orchid — *Paph. Langley's Pride* was owned by Mr. B. Voogt. The Reserve Champion went to a plant of *Cat. Tiffin Bells*, bearing two shapely blooms, tabled by Mrs. Lyn Grubb.

Mr. and Mrs. L. Heimann's display showed how a collection of a variety of orchids can be built up over the years, and displayed to one's own pleasure, and to the delight of society members and patrons at showtime. This was the first prize winner in the display section, and it contained many individual prizes for orchids.

The members of the society are very proud of their charity efforts throughout the years, as part of their proceeds from the orchid shows have been distributed to the Hospital, Blue Nursing Service, Red Cross and Homes for the Aged.

At this date it is proposed to hold the Autumn Orchid Show in the same venue over the weekend of the 7th and 8th April, 1979.

EASTERN DISTRICTS O.S.

The Spring Show was staged on the 9th and 10th September, in the Guardian Angel's School Hall, Wynnum.

Champion of the Show, *Cym. Burgundian 'Sydney' AM/RHS*, was owned by Mr. and Mrs. L. Williams, well known for their achievements in the growing of cymbidiums. These growers also gained the honour of Champion Specimen with their entry *Den. gracilicaule*, also a Special Merit for entry *Cym. Yvonne*.

Cattleyas, predominately white went to P. & L. Cotton for their *Cattleya Esbetts 'Ann' AM/AOC/QOS*.

In the cattleya coloured mauve/pink, *C. Mem. Crispin Rosales* tabled by Mr. G. Kellermeir took the first placing.

Paph. venustum presenting three quality blooms, entered by Mrs. L. Kench won the Paphiopedilum Species Section.

Special mention must be made of the mass display of orchids and foliage plants at the front entrance of the hall. This was a non-competitive exhibit, rich in colour and design, most of the plants owned by Mr. and Mrs. Watson, and son Mr. Daryl Watson, who arranged the colourful mass of blooms that enhanced the entire orchid show.

Members of this society are now working hard on their plan for the Autumn Show to be staged early in April 1979.

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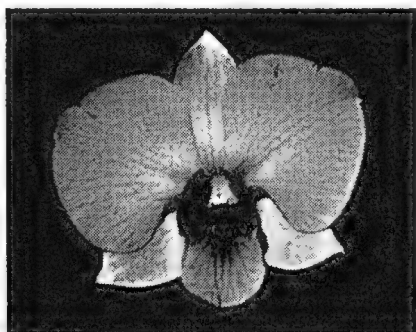
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COMING EVENTS

Sixth Australian Orchid Conference. Hobart, Tasmania, 1st to 7th October, 1979.

European Orchid Congress. To be held in beautiful Zurich, Switzerland, 22nd to 24th March, 1979. Details: Mr. C. F. Oertle, CH-9053, Teufen, Switzerland.

U.S.A. San Diego County Orchid Society & Orchid Digest Western Orchid Congress. Mission Valley, San Diego, 22nd through to 25th March, 1979.

Santa Barbara Cymbidium Congress. Week-end preceding above.

San Francisco O.S. Show. Hall of Flowers, Golden Gate Park, San Francisco, Calif., U.S.A. Sat. 10th Feb. and Sun 11th Feb. Banquet Friday night 9th. Australians very welcome (ask Syd Monkhouse and Tom Henry). For details contact President Fred. A. Shull at 1641 7th Avenue, San Francisco, Ca 94122, U.S.A.

Tenth World Orchid Conference. Durban, South Africa, 11th-18th September, 1981.

New Zealand Orchid Conference. Auckland, October, 1980. Host is North Shore O.S. Details: Secretary, North Shore Orchid Society, P.O. Box 33-493, Auckland, New Zealand.

REDCLIFFE & DISTRICT O.S.

The Spring Show was held in the R.S.L. Hall, Redcliffe, for three days over the second weekend in September, again proved another successful venture for this ever active Orchid Society.

No set entrance fee is charged, but a small donation not refused, AND still a donation of value was made to the Blue Nursing Service. The Show was officially opened on the Friday evening by the Mayor of Redcliffe, Ald. B. Frawley, and on Saturday morning a procession of Marching Girls, School Fife Band and Youth Organisations, paraded through Main Street, and the Marine Parade, promoting the Orchid Show.

Many orchid growers arranged displays of blooms in colour harmony, with foliage plants, thus creating an atmosphere of a bright, brilliant, beautiful showing of orchids.

First placing in the displays went to a group of members, D. Wanka, K. Howard, T. Benson, and K. Balkie. The display featured the winning *Paph.* Cardinal Polish 'Kathleen' hcc/cos, and first *Cymbidium* Western Rose 'Perfection', and the Best White Phal. all owned by Doug. Wanka.

Den. Yukidaruma 'King', owned by Mr. M. Carmody was selected Champion Orchid of the Show, whilst Champion Species went to *Amesiella philippinense* presenting five choice blooms, owner Mr. R. Turner.

Champion Species Specimen, *Ludisia discolor*, carrying approximately 40 spikes of flowers, was tabled by Mrs. Scott.

Following on this show the members assembled their props, and more orchids — in fact more than could be carried — and travelled the 24 miles to Brisbane to arrange the Society's display in the Q.O.S. Annual Spring Show. Reward for their effort was first placing in the Affiliated Society's Exhibits.

NEW SECRETARIES

Australian Orchid Council: Mrs. B. Lynch, 23 Holder Ave., Hove, S.A. 5038.

Victorian Orchid Club: Mrs. I. Hutchins, 37 Elliotts St., Mordialloc, Vic. 3195.

Cumberland Orchid Circle: Mr. R. Rivett, 33 Goodlands St., Baulkham Hills, N.S.W. 2153.

Dendrobium Culture in Tasmania

CHRIS NICHOLAS

Tasmanian growers in general bypass hard-cane *Dendrobiums* in favour of the spring flowering, cool growing types.

I persevered with a number of the *Phalaenanthus* hybrids for quite some time but always with the same result; flowers too late.

I found that even though I could get reasonable growth with just a little heat, the growing season in Tasmania is too short, artificial heat or not, so that when the plants should have been in bloom during autumn they were just coming into bud. These buds would open in the Spring but by then they were very tough and wizened and the resulting display was most disappointing.

Himalayan species such as *D. thyrsiflorum*, *D. densiflorum* and *D. fimbriatum* do quite well in Tasmania. They are generally classified as needing some heat in temperate zones such as ours and no doubt they appreciate it; however, they do quite well without, provided the canes are well ripened and given a full resting period.

Softcane hybrids revel in our cool climate and clear skies. Provided they get plenty of light, abundant water through the growing season and a very definite resting period, they flower well.

Unfortunately flowering times have changed over the years. In the early 1960's dendrobiums were quite a feature of our spring shows but now it is rare to see one in bloom at this time and they generally flower from late November into December.

This appears to be in line with our changed seasons. When I first started with orchids we tapered the watering of *Dendrobiums* from about mid-February so that by the end of March they were definitely resting and the flowering nodes appeared in June. Due to the late summers we now experience they are in active growth until mid April and the nodes are just appearing as I write this at the end of July.

Quite a few Tasmanians are trying out the exciting new Yamamoto Hybrids and of course we are all waiting for the day we can get more blooms to the cane than Russ. Martin does. Maybe we won't do it this year but you can find out if we have made it in 1979 when you come to the 6th Australian Orchid Conference in Hobart in October.

7 Kelvin Ave., Moonah, Tas. 7009

RECENT AWARDS, ORCHID CLUB OF S.A.

At the judging meeting during the Spring Festival, the judging panel also had the pleasure of several well known Interstate Judges, namely Mr. Frank Slattery, Mr. John Marks, Mr. Lou Sasso and Mr. Ron Mansfield.

No. 101. *Dendrobium akataki* 'Queen' was awarded a Highly Commended Certificate for Mr. Russell Martin of McBean's Orchids. A soft cane dendrobium with 8 canes, the best 90 cm. tall. The last 2 canes carried 11 and 10 flowers respectively. The flowers were well held and faced the viewer, being both firm and fresh. The lovely pink flowers really glistened. The plant was growing in sphagnum moss, held in a 5 inch plastic pot. No. 106 27.9.78.

No. 102. *Paphiopedilum fairieanum* 'Red' gained an award of merit for Mr. Bill White on 17.7.78. The plant growing in a 5 inch plastic pot which it had filled, had 3 flowers held on long stems well above the foliage. The flowers were of very good size and marked with distinct purple stripings on the dorsal and having a complementing yellow/green labellum.

No. 103. *Odontoglossum* Cathay 'Lyoth Khan' x *Odontioda* Dalmar 'Lyoth Velour' gained a Highly Commended Certificate for owners Adelaide Orchids on 3.8.78. A well grown plant with 2 racemes flowering off the same bulb. Each raceme had 8 and 9 flowers respectively. The stems were very strong, supported only to the first flower. The flowers of greyed purple colour and the labellum edged white were both shapely and distinctive.

No. 104. *Cymbidium* Tapestry 'Melva' gained an award of distinction on 7.9.78 for Mr. R. Baker. A well grown plant with 3 spikes of 8, 8 and 9 flowers respectively. The flowers were of a striking red, slightly rectangular in shape and very large.

No. 105. *Cymbidium* Doreen Darwin 'Miss Amanda' gained a Highly Commended Certificate for Adelaide Orchids on 7.9.78. The plant had one upright spike carrying 7 shapely white flowers, which were glistening and showed no sign of staining. Flowered under strong light it would be interesting to see if the flowers would 'stain'.

No. 107. *Oncidium* Mexico 'Shirly Bird' gained a Highly Commended Certificate for Adelaide Orchids on 5.10.78. A strong growing oncidium with 2 1½ m racemes each with 15 secondary spikes and having 56 fully opened flowers and 32 buds on each raceme to open. The flowers were dark chocolate brown lightly barred yellow and an all over yellow labellum.

ORCHIDS AT GLADSTONE HARBOUR FESTIVAL

The Gladstone Orchid and Foliage Society will be staging the Eight Annual Show over Easter week-end, 1979, at Goondoon Street, Gladstone. The Show opens 1 p.m. Friday and continues until 1 p.m. Monday. It is one of the major attractions of the Gladstone Harbour Festival. Visitors will be very welcome. Intending exhibitors should contact Mrs. L. Merritt, Honorary Secretary, P.O. Box 867, Gladstone, Queensland 4680.

NEW CLUB IN ROCKHAMPTON

There is a grapevine report of a new club up Rockhampton way called the Capricorn Orchid and Foliage Club. Happy growing to members. How about sending the editor some of the good oil about yourselves: you do have a wonderful area for orchids up your way. Tell "A.O.R." readers about it.

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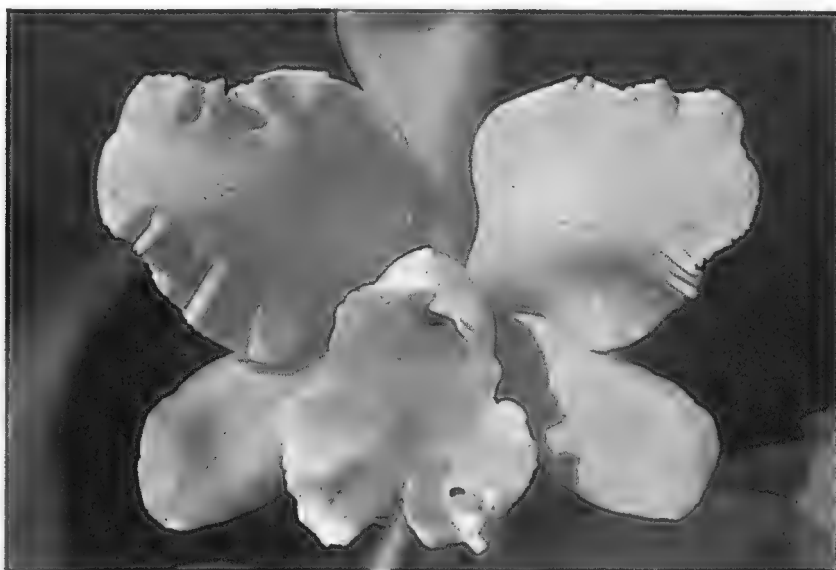
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Sleeping Beauty 'Helen'	\$10	
Papa Sam 'Erigolia'	\$15	

GREENS

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